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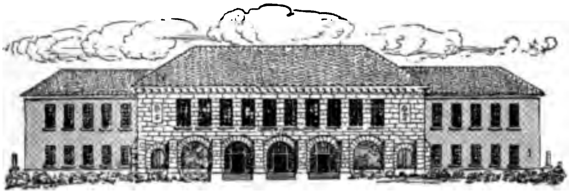

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 29

AMERICAN AGRICULTURAL COLLEGES

A STUDY OF THEIR ORGANIZATION AND THEIR REQUIREMENTS FOR ADMISSION AND GRADUATION

By CHESTER D. JARVIS
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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., June 28, 1918.

SIR: By what has come to be known as the first Morrill act (July 2, 1862), the Congress of the United States appropriated to the several States for the establishment and maintenance of colleges of agriculture and mechanic arts public lands from the proceeds of which they now receive a total annual income of approximately $900,000. Through later acts of Congress (1890 and 1907) the Federal Government appropriates for the further support of these institutions the sum of $2,500,000 annually. The institutions receiving aid from these appropriations are more closely allied and have more common interests than any other group of colleges in the United States and have come to be looked upon as in some measure a national system of higher education. To assist the responsible officers of these institutions in their task of constant readjustment of organization and management on the basis of changing conditions and needs, and to give to officers of secondary schools and to the general public information about the requirements of these colleges for admission and graduation, I recommend that the manuscript transmitted herewith be published as a bulletin of the Bureau of Education. The manuscript is the result of a study made at my request by Dr. Chester D. Jarvis, the bureau's specialist in agricultural education.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

THE SECRETARY OF THE INTERIOR.

INTRODUCTION.[1]

The present pamphlet has been prepared for the special use of persons charged with the administration of agricultural colleges. Inasmuch as it shows in tabulated form the practice of the various colleges concerning the distribution of required subjects, committees on "courses of study" should find it useful in planning curricula. Principals of secondary schools, also, should find in this bulletin much information that may aid them in advising their students with regard to the curricula offered by the various colleges.

The bulletin comprises three parts. Part I comprises general discussions and tabulations concerning the government and organization, and the agricultural curricula offered by each institution. Part II pertains to the requirements for admission, and Part III to the requirements for graduation. In the appendix, page 97, will be found tabulated outlines showing the scope and credit value of the graduation requirements for the several institutions. Where the method for awarding credit differs from that adopted here as a basis for comparison, the adjusted credit value of the work is shown along with the institution's credit value. Summary deductions will be found on pages 16, 31, and 59.

The tabulations presented are based upon individual statements concerning the several institutions. These statements were prepared from information contained in the latest college catalogues on file (usually those announcing courses for 1917–18), from Government reports, and from information obtained by direct correspondence. The statements were sent to the respective institutions for verification. In all but four cases the statements were verified and returned. In the cases of the four colleges failing to return the statements they were assumed to be correct. In a few cases catalogues have been received after the completion of the manuscript, but since alterations in the individual statements at that time would have necessitated the remaking of the tables, no attempt has been made to alter the records in harmony with the later catalogues. In most cases, however, the statements were modified by the college officers to harmonize with forthcoming catalogues.

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[1] Any disagreement from present practices found in this document may be accounted for in the delay in publication incident to the priority demands of emergency matters. The manuscript was presented for publication in December, 1917

The investigation embraces all of the land-grant colleges (act
1862) offering courses in agriculture, except those for the colored ra
In the latter the conditions are so different that there would be lit
gained from bringing them into comparison with the other colleg
As a class of public institutions, however, they offer a splendid opp
tunity for a similar study.

A study similar to the present one was undertaken a few years a
by Prof. F. B. Jenks,[1] while employed by the Bureau of Educatio
The data collected at that time have been placed at the writer's d
posal and have proved extremely valuable, especially from an histo
standpoint.

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[1] A preliminary report of Prof. Jenks's study was presented at the Atlanta meeting of the Associatio
American Agricultural Colleges and Experiment Stations and forms a part of the report of proceedings
the year 1912.

AMERICAN AGRICULTURAL COLLEGES.

A STUDY OF THEIR ORGANIZATION AND THEIR REQUIREMENTS FOR ADMISSION AND GRADUATION.

PART I.—ORGANIZATION OF LAND-GRANT COLLEGES.

GOVERNING BOARDS.

There appears to be great diversity in the form and character of the governing bodies of the several institutions under discussion, but when compared with that of the generally endowed institutions, they show a remarkable uniformity. The greatest variation is found in the name, which is of little consequence, and in the number of members.

Name of governing boards.—Reference to Table 1 shows that in 23 institutions the governing body is known as the "board of trustees"; in 12 institutions it is designated as the "board of regents"; in 4 it is the "State board of education"; in 3 the "State board of agriculture": and in each of the remaining 8 institutions a distinct designation is in use. In all, 12 different names are applied to the governing bodies of the land-grant colleges.

Size of governing boards.—The number of members on the several boards varies from 4, which constitutes the Kansas State Agricultural College board, to 41, which comprises Rutgers College board. The median[1] number of members is 10. Eight institutions have boards of 5; two, boards of 6; four, boards of 7; two, boards of 8; seven, boards of 9; four, boards of 10; three, boards of 11; two, boards of 12; five, boards of 13; two, boards of 15; and the remaining ten have boards of 17. 18, 18, 20, 23, 31, 32, 32, 40, and 41 members, respectively.

Ex officio members of governing boards.—Thirty-three institutions have ex officio members on their boards. The number of ex officio members varies from 1 to 11, the median number being 2. Seventeen institutions have no ex officio members on their boards; 7 have 1; 12 have 2; 6 have 3; 5 have 4; and the remaining 3 have 7, 8, and 11, respectively.

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[1] The "median" number is the middle number in a series arranged in order of magnitude.

In 24 instances the governor of the State is an ex officio member. In 25 cases the superintendent of public instruction, or a similar official with a different title, is an ex officio member. In 13 cases the president of the college or university is an ex officio member. A great many other State officials, such as the lieutenant governor, the chief justice, the attorney general, the secretary of state, the State treasurer, and the speaker of the assembly, are occasionally ex officio members. In many cases, the State board of agriculture and the State grange are represented by an ex officio member.

In several cases certain ex officio members are denied the voting privilege. This more frequently applies to the president of the institution, but sometimes includes the governor and other officials. Information is incomplete with regard to this point, but such cases as are known to exist are indicated in the table.

Method of appointing board members.—In 44 cases the governor, by constitutional authority, appoints all or a portion of the members. Although not always indicated, such appointments are frequently subject to the approval of the State senate. Where this is known to be the case, it is indicated in the table. In six institutions, one or more members are elected by the alumni. In some cases, the members nominated by the alumni must be confirmed by the governor. The members of the board of the University of Vermont are chosen by the State legislature. In four institutions, all or part of the members are chosen by the board itself. For four institutions, Illinois, Michigan (Agricultural College), Nebraska, and Nevada, the members of the board are elected by the people. In Oklahoma Agricultural and Mechanical College, also, the president of the board, who is a salaried officer, is elected by the people. With few exceptions, as shown in the table, the board members of the several institutions are chosen by one of the above methods.

Term of office of board members.—In general, there is considerable uniformity with regard to the term for which members are appointed. In 2 institutions, 3 years is the term; in 12 institutions, 4 years; in 4 institutions, 5 years; in 18 institutions, 6 years; in 3 institutions, 7 years; in 2 institutions, 8 years; in 2 institutions, 9 years; in 2 institutions, 12 years; in 1 institution, 16 years; and in 4 institutions, the members are chosen for life or indeterminate terms. In some institutions, some of the members are appointed for shorter or longer periods, the periods here refer to the majority members. The median term of office is six years.

Political restrictions.—In eight States the law requires that the governing board of the State university or college shall be bipartisan and in six of these cases the number of members that may be appointed from any one political party is designated. Cornell University requires that a majority of the members shall not belong to any one religious sect or of no sect. Wisconsin law requires that two members of the board shall be women. In 37 States there are no political restrictions regarding the appointment of members for governing boards.

CENTRALIZED CONTROL.

The State university has come to be regarded as a part of the educational system of the Commonwealth. In States where there is but one tax-supported institution of higher learning, the problem of administrative control is a simple one. In many States, however, such a happy state of affairs does not exist. The following statement shows in a general way how the several States have organized their higher education:

(1) States having all higher education consolidated in a single university, comprehending all departments provided in the State, with centralized administration and under a single board of control: Arizona, Arkansas, California, Idaho, Illinois, Kentucky, Louisiana, Maine, Minnesota, Missouri, Nebraska, Nevada, Tennessee, Vermont, West Virginia, Wisconsin, Wyoming.

(2) States having a single college (commonly a land-grant college for agriculture and the mechanic arts) and not providing other forms of higher education in a State institution[1]: Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New Jersey, Rhode Island, Pennsylvania.

(3) States having two State institutions (unless otherwise indicated a State university and a land-grant college for agriculture and the mechanic arts): Alabama, Florida (State University, State College for Women), Indiana (Indiana University, Purdue University), Kansas, Michigan, North Carolina, North Dakota, Oregon, Utah, Washington.

(4) States having three or more State institutions: Colorado, Georgia, Iowa, Mississippi, Montana, Ohio, Oklahoma, South Carolina, South Dakota, Texas, Virginia.

Thus it appears that 25 States provide in one institution whatever higher education is afforded; 10 States maintain two separate institutions, and 13 States maintain three or more higher institutions. Eight of the States maintaining two or more institutions, Florida, Georgia,[2] Iowa, Kansas, Mississippi, Montana, North Dakota, and South Dakota have consolidated higher education under a centralized board of control.

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[1] A number of States partially support higher education in one or more institutions over which they have no control. Such institutions are not regarded here as State institutions

[2] The University of Georgia comprises several quite independent units, each with a distinct board, but all are subordinate to the university board.

INTERNAL ORGANIZATION AND ADMINISTRATIVE RELATIONSHIPS.

During recent years the rapid development of the agricultural colleges, especially with regard to extension activities, has brought new problems and a renewed interest in organization and administration. With greater diversity of interest and with ever-increasing appropriations, calling for larger working staffs, has come a greater need for careful organization and a clearer understanding of administrative relationships.

In the broader aspects, the administrative organization of the several institutions is very similar. While some of the institutions are designated "universities" and others as "colleges," the type of organization of the latter in most cases closely resembles that of the former. In other words, the institutions with the more modest designation usually are made up of two or more major divisions, each with its dean and fairly distinct faculty. In the agricultural colleges of seven States—Connecticut, Georgia, Hawaii, North Carolina, Rhode Island, South Dakota, and Washington—no division of faculty is apparent. In these colleges, however, the agricultural work is administered through the usual administrative divisions—instructional, research, and extension; and in such colleges these are regarded in this discussion as major divisions. Of the 50 institutions, two embrace 13 major divisions, three embrace 12, three embrace 11, one embraces 10, three embrace 9, six embrace 8, five embrace 7, eight embrace 6, and 19 embrace less than 6 major divisions.

In 37 institutions, the agricultural work is administered through three coordinate administrative divisions—resident instruction, research, and extension. The list includes all of the agricultural colleges except those of Georgia, Hawaii, California, Maine, Illinois, Missouri, Nebraska, New Jersey, New York, Ohio, Pennsylvania, Porto Rico, and Tennessee. In four of these—California, Illinois, Missouri, and New York—the work is integrally administered through the heads of the various subject-matter departments. Assuming that the chief executive officer, the dean, in each of these cases, performs the functions of four offices, the organization is quite similar to that in which the work is administered through the three divisions. In the colleges of Georgia, Maine, New Jersey, Ohio, and Pennsylvania, the extension service constitutes a department, coordinate with subject-matter departments. In Georgia, Hawaii, Ohio, and Porto Rico the experiment station is distinct from the college of agriculture. The Universities of Nebraska and Tennessee recognize the three administrative divisions, but not as coordinate.

Thirty-three of the institutions have adopted the plan of holding extension specialists responsible to the subject-matter departments for the correctness of their teaching. In the remaining colleges, cluding those of Arizona, Arkansas, Kentucky, Louisiana, Maryland, Minnesota, Mississippi, Nevada, North Dakota, Rhode Island, South Dakota, Tennessee, Texas, Washington, and Wyoming, the extension specialists are regarded as independent of the subject-matter departments. In most of these cases, however, the specialists are required to conform their teaching to that of the respective departments.

Unlike other institutions of higher learning, the agricultural colleges are called upon to administer three lines of service approximately equal in importance—resident instruction, agricultural extension, and agricultural research. Considerable confusion has resulted from attempts to administer these three kinds of service through the traditional form of organization. As a result of the necessity for promoting agriculture along these three lines and on account of constantly increasing appropriations, large groups of specialists have been engaged to work on each of the recognized agricultural subjects. In the process of development, the department, rather than the individual, has become the unit of organization. This condition has resulted in the development of large departments, which sometimes have been administered more or less autocratically, with a consequent loss of initiative on the part of the individual. In some cases, also, it has resulted in administrative conflict between the department head and the director in charge of the kind of service concerned.

With a view to obtaining a better understanding of administrative relationships in the agricultural college, the committee on college organization and policy of the Association of American Agricultural Colleges and Experiment Stations asked the United States Bureau of Education to make a study of the agricultural college organization. A complete report of the findings, with a tentative set of recommendations, was made to the committee in November, 1916. One year later, at the time of their meeting in Washington, the committee after some discussion and amendment, embodied the recommendations in their report, which was accepted by the association.[1]

AGRICULTURAL CURRICULA, DEGREES, AND CERTIFICATES.

GRADUATE WORK.

Forty-four institutions offer opportunity for graduate instruction in agriculture. The six agricultural colleges that do not offer such work are those of Arkansas, Colorado, Connecticut, Porto Rico, South Carolina, and Utah. Thirty-four offer only a master's degree and 10 offer a doctor's degree. The land-grant institutions offering doctor's degrees for work in agriculture are those of California, Illinois, Massachusetts, Minnesota, Missouri, Nebraska, New Jersey, New York, Ohio, and Wisconsin.

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[1] These recommendations are elaborated in Higher Education Circular No. 8 of the United States Bureau of Education.

There is a remarkable uniformity in the use of degree titles. In all cases the doctor's degree is designated as Ph. D. The Massachusetts Agricultural College offers in addition the degree D. Agr., the requirements for which are similar to those for the Ph. D. except that an accepted amount of successful professional experience is necessary. The master's degree in 28 cases is designated as M. S. In 6 cases it is designated M. S. A. and in 6 other cases as M. S. Agr. Rutgers College uses the designation M. Sc. Massachusetts Agricultural College offers in addition the professional degree M. Ar., Michigan Agricultural College offers several professional degrees, such as M. Agr., M. Hort., M. For., and M. V. S. The University of Missouri offers the same advanced degrees, A. M. and Ph. D. in agriculture as in other branches. It also offers an M. F. (master of forestry) degree. Cornell offers an M. L. D. (master of landscape design) degree. (See Table 2.)

FOUR-YEAR CURRICULA.

As shown in Table 2, all the colleges offer four-year curricula leading to the bachelor's degree. In 40 cases the simple title B. S. is used. In 4 cases the designation is B. S. A., and in 5 cases it is B. S. Agr. Georgia State College and the University of Missouri offer degrees with a distinct designation, B. S. For., for graduation in forestry. In Iowa State College, the degree indicates the subject of specialization, such as B. S. in A. E., B. S. in A. H., B. S. in Hort. for specialization in agricultural education, animal husbandry, and horticulture, respectively.

Major options and opportunities for specialization.—In Table 3 an effort has been made to show the opportunities for specialization offered by the several colleges. An average of eight opportunities for specialization are offered by the colleges. In many cases, especially in the large universities, opportunity for specialization is even greater than is indicated by the table. In most cases a definite number of major options are open for election, but in a few of the larger universities, notably California, Illinois, Cornell, Ohio State, and Wisconsin, students may specialize in any department of the college of agriculture, or even in some particular phase of the work of a department. In these cases the common practice is to require students to carry a minimum amount of work in the major subjects and sometimes one or more minor subjects, but in a few cases the selection of courses in the subject of specialization is left to the student and his adviser. In the institutions where the major option plan is in operation, the common practice is to prescribe most of the work within each option, but in many cases the major option schedules are regarded only as suggesting suitable combinations.

It may be seen from the table that California and Cornell offer 22 and 21 opportunities, respectively, for specialization. Oregon and Massachusetts Agricultural Colleges and Illinois and Wisconsin Universities offer 15 or more opportunities. Nine other institutions offer 10 or more, 23 others offer 5 or more, and the remaining 12 offer less than 5. Animal husbandry, agronomy, horticulture, dairy husbandry, and agricultural education occur most frequently among the major options. Forty-four institutions offer options in animal husbandry, 43 in agronomy, 37 in horticulture, 31 in dairy husbandry, and 25 in agricultural education. A former inquiry revealed the fact that 40 of the colleges provide for specialization in agricultural education, so that 15 of the institutions offer sufficient elective work in connection with other options to enable students to carry the required number of educational courses to qualify for State teachers' certificates.

Although 24 different options are listed in the table, 10 institutions offer options in unlisted subjects. Arkansas offers one in professional agriculture. California offers opportunities for specializing in citriculture, in nutrition, and in viticulture and enology. Kansas State Agricultural College offers an option in the milling industry; Maryland State College one in the canning industry; Massachusetts Agricultural College one in rural sociology; Michigan Agricultural College one in apiculture; University of Minnesota three in different phases of forestry; Cornell one each in meteorology and extension teaching; College of Hawaii one in sugar technology; and the University of Vermont one each in plant industry and animal industry. Among the unusual options listed in the table, attention is called to that of agricultural journalism, offered by Massachusetts Agricultural College and by the University of Wisconsin, and to that of genetics offered by California, Cornell, and Wisconsin.

SECONDARY CURRICULA.

Most of the institutions offer three, two, or one year curricula for the benefit of persons who do not care to spend four years at college or who are unable to meet regular entrance requirements. Such curricula usually contain a larger proportion of technical work and a smaller proportion of academic work. In some cases, students in these shorter curricula are given an opportunity of carrying a certain number of courses that may be accepted for regular admission. In most cases, however, work completed in the shorter curricula is not accepted toward satisfying the requirements for graduation in the degree curricula.

These shorter curricula, often designated as "school of agriculture" curricula, extend over one, two, or three years, but each year frequently is of shorter duration than the regular college session. The duration varies from four to nine months.

Reference to Table 2 again will show that 10 colleges offer a three-year curriculum, 24 offer a two-year curriculum, and 6 a one-year curriculum. South Dakota offers a four-year secondary curriculum. In most cases students completing these curricula are given certificates or diplomas with the designation associate. In other institutions, such as Florida and Wisconsin, they are called "graduates" and given such titles as G. F. (graduate in farming) or Grad. Agr.

SHORT CURRICULA.

Thirty-eight colleges offer short curricula either in the winter or summer. Some offer several curricula in various subjects and of varying duration. In most cases these are winter curricula covering periods of from 10 days to 5 months. Many institutions hold six-day conferences known usually as "farmers' week." These or other curricula of less than 10 days are not included in the tabulations. In some cases short curricula are offered during the summer months. South Carolina, for instance, offers special work in cotton grading during the month of August. Texas offers six weeks of the same kind of work during June and July.

In most cases a certificate of attendance is given upon the completion of the various short curricula.

SUMMER SESSIONS.

Thirty-eight of the colleges offer an opportunity for study for a period of from 4 to 12 weeks during the summer. In most cases regular undergraduate courses are offered, so that matriculated students who take them may receive credit toward graduation. Many institutions offer also special curricula for unmatriculated students. Purdue offers a 12 weeks' session; Kansas State Agricultural College and Louisiana State University offer sessions of 9 weeks; the Universities of Illinois, Missouri, and Nebraska, and the Oklahoma College offer sessions of 8 weeks; North Carolina College of Agriculture and Clemson College offer sessions of 4 weeks; and the remaining 29 offer sessions of 6 weeks.

CONCLUSIONS CONCERNING ORGANIZATION.

Government.—During recent years, representatives of the Bureau of Education have conducted several educational surveys, including inquiries concerning the institutions of higher learning. This has afforded abundant opportunity for an examination of the efficiency of various types of governing boards. In the report of the survey of the University of Nevada[1] appears an extended discussion concerning the nature, powers, and duties of governing boards in general. The committee in charge of this survey sets forth the following general principles:

1. Experience has shown that public administrative boards[2] consisting of from 7 to 15 persons have usually been most successful.
2. The governing boards of State universities should have no connection with partisan politics. This condition is best attained if their members are appointed by some official agent representing the whole community, preferably the governor.
3. University regents should be appointed for long terms.
4. The members of such bodies should receive no compensation beyond their necessary traveling expenses.
5. Members of a university board of regents should be representative citizens, persons of enough education to enable them to form competent judgment on questions of university policy, preferably in a majority of cases university graduates; but not educational experts.
6. The scope of the board's activities should be strictly limited, either by law or by board ruling, to the determination of the general policies of the institution or institutions under its control, in consultation with the executive officers; the appropriation of moneys or the approval of the distribution of appropriations made by public appropriating bodies; and the appointment of institutional employees on the recommendation of the institutional executives. In other words, the function of the governing board is, in the broadest sense of the word, legislative.

This statement of principles should be studied in connection with the committee's full discussion, which makes it clear that there may be many efficient governing boards whose form differs from that suggested, and that the recommendations are intended only for those States or institutions contemplating a reorganization of their boards.

Centralized control.—As a result of the bureau's investigation of the higher educational systems of several States and in the light of experience and theoretical considerations, two principles for the organization of higher education may be suggested: (*a*) Whenever possible, all higher education, other than that of the normal schools, should be consolidated in a single State university; (*b*) whenever two or more higher institutions are established, they should be under common control and should be assigned definite fields to insure appropriate coordination and to prevent wasteful duplication of courses or departments.

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[1] U. S. Bureau of Education, Bulletin 19, 1917.

[2] This refers to boards which exercise legislative functions only. Executive boards whose members devote their whole time to the work of administration (such as the Kansas State board of administration) are not taken into account in this statement of principles.

Internal organization.—The following set of recommendations was prepared by the Bureau of Education, and after minor changes, as shown by the italicized phrases, was accepted by the Association of American Agicultural Colleges as a part of the report of its committee on college organization and policy for the year 1917:

1. That the individual specialist, *capable of working independently*, should be regarded as the unit of organization.

2. That the group of working specialists on any one of the recognized subjects, regardless of the kind of service, should constitute the subject-matter department.

3. That specialists should devote their time mainly to one kind of service, but provision should be made for exchanges for the mutual advantage of each.

4. That one member of each department should be designated as chairman, *or administrative head.*

5. That the members of the subject-matter department should be given a voice in the designation of their chairman *or administrative head.*

6. That authority for subject matter should be confined to the group of specialists comprising the subject-matter department, and that administative control should be limited to the amount and method of work.

7. That the distribution of administrative authority should be on the basis of the kind of service.

8. That the three kinds of service, each in charge of a secondary administrative officer, should be coordinated under a chief executive who, in the case of a large institution composed of several faculty groups, should be an officer other than the president.

9. That the official designation "dean" in an agricultural college should be applied only to the chief executive officer who is responsible for the coordination of the three phases of agricultural service, and that of "director" should be applied to the coordinate officers in charge of each of the three lines of service—resident instruction, research, and extension.

10. That when one individual performs the duties of two or more offices his official designation should identify clearly the officer with the respective offices assigned.

11. That the leaders in charge of the various phases of the extension service should be regarded as administrative officers and should not usurp the duties of the specialists in the various subjects. Where an individual serves both as specialist and administrative leader, a dual responsibility should be recognized.

12. That in the promotion of extension projects controlled by either connected or cooperating colleges, the same administrative relations with the subject-matter departments concerned should exist as with departments that are organically connected.

13. That incoming correspondence, except that of an administrative nature, should be referred to the subject-matter departments concerned, and there referred to the individual best qualified to supply the information called for.

14. That specialists, in whatever kind of service, should be on an equal basis from the standpoint of rank and official designation. If differentiation of extension and research specialists is desirable, the prefixes "extension" and "research," respectively, may be used in connection with the customary professorial titles.

PART II.—REQUIREMENTS FOR ADMISSION.[1]

METHODS OF ADMISSION.

In each of the 50 institutions applicants are admitted by either examination or certificate. In most cases examinations may be taken either under the immediate direction of the institution or under the direction of certain examining boards. In several cases, however, the institutions do not offer entrance examinations and applicants for admission by examination are required to take the examinations of the college entrance examination board of their respective regions.

Larger proportions of students each year are being admitted by certificate. The lists of approved high schools are constantly becoming larger and the reciprocal relations between college and high school are being gradually improved. In many cases the State colleges and universities are cooperating with the State departments of education with a view to bringing about a practical basis for articulation between secondary and higher education. Such cooperation in some cases consists of inspecting and approving of the various secondary schools with a view to establishing lists of accredited schools. The colleges have profited by this contact with the high schools, and have modified their requirements to meet the popular demand. High schools also have been benefited by the contact with the colleges, and they are fast becoming liberally standardized. Although standards are somewhat variable, an "accredited high school" in most States is one which attains certain prescribed standards of equipment, teaching force, and efficiency, and administers in a satisfactory manner a four-year plan of study in advance of the eighth grade or grammar-school studies, and including usually four years of English, three years of mathematics, three years of history, three or four years of foreign language, and two years of science, and requires for graduation 15 or 16 units of work.

Certificates are accepted generally from not only the high schools that are accredited by the institutions themselves but from high schools that are accredited by State colleges and universities in other

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[1] The present discussion of the requirements for admission concerns the requirements for admission to the agricultural curricula only.

States. Students from district or county agricultural schools, from normal schools and from other colleges are admitted generally by certificate.

AGE REQUIREMENTS.

In 28 of the institutions there is a definite minimum age limit for admission to freshman standing. In 24 of these the limit is fixed at 16 years; in 2 institutions it is 15 years; in 2 others it is 14 years. In 22 institutions there is no fixed age limit. The minimum age limit for women in 2 institutions is 17 years. In the other institutions the age limit is the same as for men. (See Table 4.)

For admission as special or unclassified students, 25 of the institutions require applicants to be at least 21 years of age; 9 require them to be at least 18 years of age; and the remainder publish no special age restrictions. As a rule this age limit applies to applicants who are unable to meet entrance requirements, but in many cases applies to all applicants to special classification.

For applicants for admission to the short curricula, the same age restrictions generally are applied as for regular freshman classification, but sometimes the age limit is slightly in advance.

OCCUPATIONAL EXPERIENCE REQUIREMENTS.

In none of the institutions is farm experience a rigid requirement for admission. In the University of Missouri, New York State College of Agriculture, and Clemson College, one year's farm experience is listed as a requirement, but in each case opportunity is provided for the making up after entering of any deficiency in this respect. In 18 institutions farm experience in varying amounts is required sometime before graduation. In most of these cases students are strongly advised to obtain such experience before entering. Deficiency in this requirement is usually made up either on the college farm or on an approved farm away from the college. Many of the institutions, although not requiring farm experience either for admission or graduation, strongly advise applicants for admission to obtain at least one year's experience on a farm before entering.

There is a growing tendency to increase farm experience requirements. The recent ruling of the Ohio State University expresses the changing attitude of many of the stronger colleges, especially those of the North:

> As a prerequisite for graduation in all the courses in the college of agriculture, excepting home economics, students graduating in June, 1919, must have had one summer of farm experience; those graduating in 1920, two summers of farm experience; 1921, three summers of farm experience; and 1923, one full year of farm experience. This requirement shall be interpreted as meaning actual work done in residence on the farm. The one year requirement, when effective, must be met before the student is permitted to register for his junior year.

In some of the institutions, especially in the East, at least half of the students in agriculture have matriculated without having had any experience on a farm. In one institution the proportion runs as high as 65 per cent. The students in many cases come from large cities, and they are not only deficient in a knowledge of farm operations, but they are completely ignorant of country life conditions. The practice of turning out graduates with no more practical experience than is obtained at odd times on a college farm, or even that obtained during summer vacations, is beginning to have a detrimental effect upon the institutions and, for this reason, the colleges are emphasizing more and more the necessity for a fair amount of occupational experience before entering college.

The need for strengthening and enforcing the requirements pertaining to practical experience is becoming more urgent since the colleges are expected to train teachers of agriculture for the secondary schools. The unpractical character of the agricultural instruction in the high schools has been the cause of the disappointment so frequently experienced by well-meaning school boards in progressive communities. Many of the agricultural graduates who have not had farm experience and who have lacked the ability and opportunity to follow the farming occupation have obtained positions as teachers. Such positions, on account of insufficient compensation, have failed to attract the men with experience in farming.

There is no doubt that the colleges are convinced of the desirability of enforcing the requirement for previous farm experience, but there is a belief on the part of many that such a ruling would cause many prospective students, who are deficient in this respect, to turn to other institutions where there are no such restrictions. The remedy, therefore, calls for either unanimous action on the part of the colleges concerning the practical experience requirements, or a more efficient method for providing the necessary practice in farm operations and the closer contact with the affairs of country people.

SCHOLASTIC REQUIREMENTS.

The unit system for college entrance.—The proper adjustment between college and high school is one of the important contemporary problems in education. Great improvements have been made during recent years, and there are indications that the next few years will mark even greater advances toward a more complete college and secondary school articulation. The fear on the part of many colleges that a greater liberality concerning entrance requirements may be looked upon as a lowering of standards seems to be a retarding factor in the movement. A thorough understanding of present conditions should serve as a foundation upon which certain classes of institutions may establish common standards and thus eliminate undesirable competition.

The introduction of the unit system has had a marked influence upon improved relationships between college and high school. The system, of course, has been abused in some instances. Some high schools are endeavoring to maintain an 18-unit standard and some colleges are endeavoring to maintain a 16-unit entrance requirement. Most institutions, however, both colleges and high schools, appreciate the danger in multiplying units for entrance at the expense of thoroughness of preparation. The unit system is based upon the principle that there is a given time at the disposal of high school students and that 16 units represents the maximum amount of work that they may be expected to accomplish satisfactorily during that time. It may be assumed also that a student who confines his attention to a few subjects during his limited school career is better prepared, either for self-support or for college, than one who during the same period has studied many subjects. The time applied to study, rather than the number of courses carried, is a better measure of a student's preparation and his fitness to enter college.

It is apparent from the present study that the great need concerning high school and collegiate articulation is for a better understanding of what constitutes adequate training for the bachelor's degree. The requirements for the eight-year period, represented by the high school and collegiate courses, should be considered as a unit. Some progress already has been made in this direction. The University of California, for example, has unified the high school and junior college work, which serves the purpose well. Each State, it would seem, should provide a statement showing what are believed to be suitable sequences for each line of specialization offered by its higher institutions. Such a statement should be of service to high-school officers in arranging appropriate schedules, and should enable students to determine definitely the ground that they must cover before graduation from college. It should tend also to eliminate the necessity for admitting to college such large numbers of "conditioned" students as are now admitted. This subject is more fully discussed in the following section (see p. 59).

Catalogue standards for admission, of course, are oftentimes quite different from those actually enforced. There are probably none of the State institutions whose paper standards are so meaningless as to admit deficient students without "conditions," but there are many colleges requiring theoretically 14 units for entrance that make a practice of admitting students conditionally who are deficient in two or more units. Since many of the conditioned students are bonafide graduates of high schools, either a relaxation in the amount of prescribed work or a liberalizing of the range of optional subjects would result in fewer conditioned students and consequently in less time being spent in making up entrance work, which may be of less value to the student than some regular college courses.

NUMBER OF UNITS REQUIRED FOR ADMISSION.

As may be seen from Table 4 all of the colleges, except three, require for regular admission a minimum of 14 units, which is regarded as the minimum number required by standard colleges. Included among these is the Connecticut Agricultural College which does not admit students on the unit basis, but requires four years of high-school work. By deducting from the total requirement the number of conditional units approved by the several colleges, the result is quite different. In a few cases students deficient in prescribed work only are admitted conditionally, but in many cases students who are from one to three units short in total requirements are so admitted. Most colleges publish statements showing the maximum number of units for which applicants may be conditioned. Others simply state that deficient students may be admitted conditionally. Assuming that the latter approve of one unit deficiency, the following statement shows the number of institutions in the various classes, based upon the number of units required for admission, both before and after deducting the number of deficient units approved:

Distribution of the colleges according to their gross and net requirements for admission.

Entrance units.	Number of institutions.	
	Before deducting deficient units approved.	After deducting deficient units approved.
16	2	1
15	30	9
14⅓	2	1
14	12	15
13	0	10
12	2	11
12½	0	1
11	1	1

During the past five years, as shown in Table 5, there has been a conspicuous increase in the number of colleges requiring 14 units for entrance. For the year 1912–13, only 34 of the 50 institutions required a minimum of 14 units for entrance, while at the present time, as shown above, 47 claim to be on this basis. As a result of this, the median requirement for entrance has been raised from 14 in 1912–13 to 15 in 1917–18. This increase in requirements has been made possible to some extent by substituting vocational subjects for certain academic subjects, which seems to indicate a general liberalizing of the college entrance requirements.

PRESCRIBED SUBJECTS.

The subjects that are prescribed for entrance by the several colleges are shown in Table 4. In general, the number of subjects that are prescribed for college entrance is decreasing, and the number for which entrance credit may be granted is increasing. Table 5 shows, among other things, a comparison of the number of prescribed units for the years 1912–13 and 1917–18. The median number of prescribed units for the former year is one-half unit higher than that for the latter. By eliminating the institutions requiring less than 14 entrance units there is a difference of one unit, the median number of prescribed units in 1912–13 being nine and in 1917–18 eight.

Only five subjects are found in the list of those that are designated as prescribed. These are English, foreign language, social science, mathematics, and natural science. One institution, Clemson College, prescribes agriculture, but this is listed in the table under science.

Of the 48 institutions [1] all prescribe *English*. The amount of preparation in this subject varies from one to four units, but 42 colleges have a fixed three-unit requirement. The University of Minnesota and New Mexico College of Agriculture require four units, but in the former case four units of foreign language may be substituted for the fourth unit of English. The universities of California, Ohio, and Wisconsin require but two units of English, and Mississippi Agricultural and Mechanical College requires two and one-half units.

Only 18 institutions prescribe *foreign language* for entrance, and, with two exceptions, all require but two units in this subject. The agricultural colleges of New York and North Dakota require three units. Two other institutions, University of Florida and Maryland State College, list foreign language as a required subject, but provide for substitutions. Many of the institutions requiring this subject stipulate that not less than two units may be offered in a single language. Some accept a third unit in a second language. In this connection it is interesting to note that 23 of the colleges do not require foreign language either for admission or graduation. In the year 1912–13 twenty of the colleges required this subject for admission, which shows that even though many institutions have raised their entrance requirement, fewer institutions require foreign language now than five years ago.

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[1] Connecticut Agricultural College and the University of Porto Rico admit to freshman standing graduates of any four-year high school, and their requirements are not on the unit basis. For this reason these institutions are omitted from this discussion.

Thirty-six institutions prescribe *history or social science*. The amount of preparation required in this subject is either one or two units, 28 requiring one unit and 8 requiring two units. In 1912–13 only 32 of the institutions prescribed preparation in history. There seems to be a tendency, therefore, to emphasize the necessity for better high-school preparation in this subject.

All institutions prescribe *mathematics*, and the amount of preparation specified varies from one to three and one-half units. One institution, the University of Missouri, requires but one unit. Two units are required by 26 institutions, two and one-half by 16 institutions, three by three institutions, and three and one-half by two institutions. Eleven institutions do not indicate how much preparation is required in either branch of the subject. Presumably they are willing to accept in any proportion any phase of the subject commonly taught in high schools. Of the 37 institutions that portion their requirements, 18 specify a minimum of one unit in algebra, 17 a minimum of one and one-half units, and two a minimum of two units. In geometry, 32 institutions specify a minimum of one unit, 4 specify one and one-half units, and one requires no geometry. Fourteen institutions specify a combination of one and one-half units in algebra and one unit in geometry, while 18 others specify one unit of each. In one institution, Alabama Polytechnic Institute, advanced arithmetic to the extent of one-half unit is required. It is possible also that some of the institutions that fail to apportion their requirements in mathematics accept advanced arithmetic, or arithmetic review, to meet the general requirements in mathematics. In general, however, it may be assumed that these institutions require one to one and one-half units of algebra and one unit of geometry.

Thirty-three institutions require preparation in *physics or other sciences*. Two require three units, five require two units, and 26 require but one unit. Nine of these institutions specify one unit in physics. One other institution, University of Tennessee, also requires that an unspecified amount of preparation in physics be included in the three-unit requirement in science. In at least one institution, University of Idaho, agriculture may be included in making up the requirements in science. Clemson College specifies one unit in agriculture. Many of the institutions specify that notebooks showing laboratory exercises shall accompany requests for science credit.

The following statement summarizes the prescribed requirements for admission:

Distribution of the colleges according to the work prescribed for admission.

Prescribed work.	Number of colleges.	Prescribed work.	Number of colleges.
English	48	History of social science	36
4 units	2	2 units	8
3 units	42	1 unit	28
2 units	4	0 units	12
Modern language	18	Science (including physics)	33
3 units	2	3 units	2
2 units	16	2 units	5
1 unit	0	1 unit	26
0 units	30	0 units	15
Mathematics	48	Physics	9
3½ units	2	1 unit	9
3 units	3	0 units	39
2½ units	16		
2 units	26	Agriculture	1
1½ units	0	1 unit	1
1 unit	1	0 units	47

The total number of prescribed units ranges from 4, required by the University of Missouri, to 10½, as required by both Maryland State College and Rutgers College. The median number of prescribed units is 8. Four institutions require exactly the median number, while 22 require less and 22 require more than this number. This presentation is somewhat misleading on account of the institutions falling naturally into one of two groups—those that do and those that do not require foreign language. In the one case the median number of prescribed units is 9, and in the other case the median number is 7. The accompanying diagram (fig. 1) represents the frequency of the totals prescribed for admission.

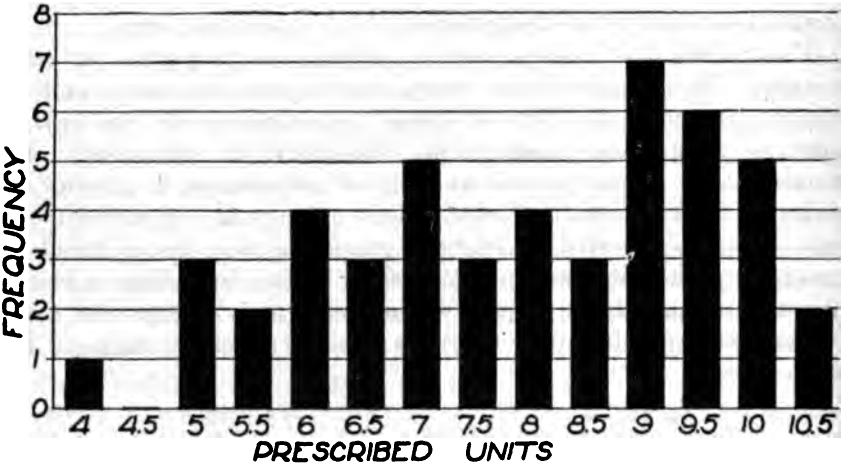

FIG. 1.—Distribution of the agricultural colleges according to the number of prescribed units in their requirements for admission.

OPTIONAL SUBJECTS.

The number of optional units required by the various colleges to satisfy the total requirement is inversely related to the number of prescribed units. The range is from 2½ to 11, and the median number is 6½. The conspicuous feature concerning "optional requirements" is the growing liberality of the institutions, as shown in Table 4, with regard to the number of optional units that may be offered in vocational subjects. In 23 institutions there is practically no limit to the number of optional units that may be offered in vocational subjects. In 15 other institutions four or more units may be offered in vocational subjects. In only 10 cases is the number limited to less than four.

Many of the institutions conspicuously publish the statement that any well-taught, high-school subject may be offered. The following statement of the University of Missouri will serve to show the attitude of a large proportion of the institutions:

> The university will accept for admission any 15 units from a first grade high school. If the distribution of units does not correspond to that recommended by the college to which the student is admitted, he will be required to carry courses in college to make up the deficiency, and this may delay his graduation.

Connecticut Agricultural College has taken an advanced step in granting freshman standing to any graduate of a four-year high school.

Reference to Table 6 will show that there is a great range of high-school subjects that may be offered for entrance. The subjects are arranged in natural groups, and the credit that may be allowed for each is shown as published in the respective catalogues. In certain subjects there is both a maximum and a minimum credit that may be offered. Whenever both are given in the catalogue, they are listed in the table. When only one figure is given for each subject, it is listed as the maximum except where the contrary meaning is obvious. In many cases, it may be regarded also as the minimum. Some catalogues fail to list the credit value of subjects other than those required for admission. In such cases the required amounts are listed in the table, but it may be assumed that credit in excess of these amounts may be allowed.

In Table 7 an attempt is made to show the frequency of occurrence of the subjects appearing upon the published lists of preparatory subjects accepted for admission. The table is presented to show that the more common high-school subjects are quite generally accepted. Forty of the colleges publish fairly complete lists, and taking this number as a basis, it may be seen that all of them accept English, Latin, Greek, French, German, algebra, plane geometry, physics, botany, Greek and Roman history, medieval and modern history, English history, and American history. At least 30 of the colleges accept Spanish, solid geometry, trigonometry, physiography or geology, chemistry, zoology, physiology, agriculture, freehand drawing, and manual training or shopwork. At least 20 of the colleges accept advanced algebra, domestic science, and bookkeeping. Ten or more colleges accept general biology, economics, civics, mechanical drawing, domestic art, commercial law, commercial geography, stenography, and music. At least five colleges accept general science, general history, and pedagogy or psychology.

Owing to the gradual introduction of vocational courses into the high schools, there is bound to be much irregularity of preparation during the next few years. Much of the technical work now given during at least the first year in college eventually will be given in secondary schools, and the agricultural colleges during the next few years will be required to adjust their curricula to conform to the gradual modification of those of the high school. This should not be a difficult problem, but during the transition stage it will require considerable duplication of work. In home economics the colleges even now find it necessary to offer certain technical courses, like sewing and cooking, that have come to be regarded as secondary-school courses. In the near future such courses as plant propagation, elementary field and forage crops, types and breeds of live stock, elementary soils, etc., may be regarded in the same way, but for the benefit of the students who have not had such courses, the colleges also will need to offer them.

The vocationalizing of high schools may necessitate also the establishment of liberal standards of preparation that invariably may be enforced. The prescribed work in such standards it seems should include preparation in such subjects as are believed to be prerequisite to collegiate courses and the optional work may include satisfactory preparation in any generally recognized secondary-school subject. It may be desirable to classify the optional subjects, as is sometimes done now, and to require a certain proportion from each group according to the general needs of the curriculum selected. In other words, the secondary school may be expected to prepare the student in a general way for his chosen vocation.

ADMISSION TO ADVANCED STANDING.

Although definite information is lacking, there seems to be much uniformity among the various institutions in the methods of granting advanced standing. In general, two methods are followed: First, by examination, and second, by transfer of credits earned at certain approved institutions. Advanced standing is rarely granted for excess secondary school work, except by examination. Some institutions, however, on the strength of approved high-school certificates showing credit for advanced work, admit students to advanced standing. In most cases collegiate credit for excess high-school work is limited to approximately 12 semester hours.

Most institutions grant advanced standing to students from other colleges or universities. Students from State normal schools also are admitted frequently with advanced credit. In most cases, certificates showing an honorable dismissal and a full statement of the student's high-school and collegiate record are required. Full credit is given usually for all work that has been done in the institution from which the student comes, provided such work corresponds to work that may be applied toward satisfying the requirements for graduation in the curriculum for which the candidate desires to register. Any deficiency in entrance requirements is satisfied usually before collegiate credit is granted.

Some institutions, especially the State universities, maintain lists of accredited colleges from which students may be admitted by transfer.[1] The basis upon which such lists are made varies with the institution. Where the lists are limited to colleges of a restricted region, the ratings usually are based upon an intimate knowledge of the institutions' standards, but the more distant colleges usually are accredited according to the ratings of the respective State universities.

In several States a definite cooperative arrangement exists between the State university and a number of smaller colleges and normal schools. Such cooperation provides for the transfer of students with full credit for two years' work from the smaller collegés to the university. In other cases it provides for a mutual exchange of students between two or more institutions at the end of two or three years. This arrangement makes it possible for students to complete their general work of the first two or three years at one institution and their special work at another institution which offers opportunities for specialization along lines not offered by other institutions of the State. Agricultural students, however, seldom avail themselves of this opportunity.

In general, students from other institutions that are admitted to advanced standing are required to complete at least one year's work in the institution from which they expect to graduate.

CONDITIONAL ADMISSION.

As shown in Table 4, it is a common practice to admit conditionally students who are unable to meet all the requirements. Of the institutions requiring 14 units or more for admission only two, University of Maine and Pennsylvania State College, distinctly state that students are not admitted with "conditions." Colorado State Agricultural College, also, may be included in this category, for such of its collegiate applicants who are unable to fully meet entrance requirements are required to register for and carry preparatory work in the three-year secondary curriculum. Two others, Purdue University and New Hampshire College of Agriculture, state that students who are deficient in any of the requirements are admitted only in exceptional cases. Mississippi Agricultural and Mechanical College, North Carolina College of Agriculture, and Clemson College, or those that require less than 14 units for entrance, do not admit students with conditions, but the first-mentioned institution accepts a one-unit condition in the prescribed work (geometry).

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[1] The lists of accredited higher institutions as maintained by the several State universities and other standardizing associations and foundations have been published by the United States Bureau of Education as Bulletin 17, 1917.

In at least nine cases—the colleges of Georgia, Hawaii, Illinois, Michigan, Minnesota, New York, Oregon, Utah, and Wisconsin—the practice is to admit students who meet the total requirements, but who may be deficient in some of the prescribed work. In two of these cases, Georgia State College and the University of Wisconsin, deficiency in foreign language only is approved. In the college of Hawaii students deficient only in physics, and in the University of Illinois students deficient only in one unit of science, are admitted conditionally. As may be seen from the table, 32 institutions, in addition to those admitting students deficient in prescribed subjects, frankly state that candidates who are unable to meet the total requirement may be admitted conditionally. Three of these fail to state in definite terms the degree of deficiency approved. One approves of two-thirds unit, 9 approve of one unit, 18 approve of two units, and 1 approves of three units deficiency.

It is a common practice in many institutions to accept students who are deficient in preparation into their two-year or three-year (secondary) curricula where an opportunity is offered for carrying certain courses that may be accepted for entrance. Such curricula are designated frequently as the "school of agriculture." As a rule students following this plan are required to spend more than four years for graduation. In a few cases, however, they are allowed to carry certain college courses as well and to receive collegiate credit after being regularly matriculated. Sometimes, for the benefit of graduates of the shorter curriculum who wish to register for a degree course, the institution provides an additional year's work which includes such required entrance subjects as are not given in the so-called "school of agriculture." Such a plan is followed in Colorado, where a three-year curriculum is supplemented with a one-year curriculum. With regard to this practice in Colorado, Dean S. A. Johnson writes:

> The school of agriculture does not professedly prepare for college admission. We have so many students in the school, however, who wish to enter college that we

provide what is known as the fourth-year course. This is especially designed to include all those entrance requirements which do not appear in the school of agriculture course of study. The school of agriculture furnishes us about 20 freshmen each year. The work of the boys in the school of agriculture is extremely irregular, owing to the fact that some have had only eighth grade work and others anywhere from one to four years of high-school preparation. It is a task to arrange for the work of those who are desiring college entrance. We do not relinquish any of the requirements for the freshman year or make special concessions to the "school" in the matter of admission.

Although 10 institutions have no fixed time limit for the removal of entrance conditions, the general practice is to require students to make up all entrance deficiencies within one or two years. In one institution, University of Nebraska, the time limit is one semester; in 23 institutions it is one year, in 6 institutions it is two years; and in 2 colleges, Massachusetts and Utah, the limit is four years, or any time before graduation.

When it is understood that in most institutions the minimum requirement for graduation is fixed at a point approximating the maximum amount of work that the normal student can complete within the given time of four years, it is obvious that a student entering with a handicap of two or three units, equal to 12 to 18 semester hours, is likely to remain deficient even at graduation. With the limited information available, it is impossible to determine the proportion of conditioned students who require more than four years for graduation, but the belief is that it is remarkably small. Even though they may have passed all required examinations, conditioned students, on account of being overworked, are not likely to be as well prepared in collegiate subjects as those who enter college without such a handicap. If in some institutions this is not true, it is obvious that the minimum requirement for graduation is too low and that normal students are not making the best use of their time. It is well known, of course, that there is a great difference in students with regard to the amount of work which may be carried successfully, but the exceptionally capable students are not usually found among those who enter with conditions.

CONCLUSIONS CONCERNING REQUIREMENTS FOR ADMISSION.

It should not be understood that the present discussion is an argument in favor of uniform entrance requirements for all of the agricultural colleges. On the contrary, it is believed that in a few of the States conditions are not such as to warrant the adoption of 14 or 15 unit standards. The colleges that are habitually admitting large numbers of students with conditions should frankly announce their willingness to accept students with the equivalent of three years of high-school work if that represents the needs of their constituency. In such cases proper provision should be made for admitting to advanced standing those who enter with credit for full four years' work. The practice in some institutions of admitting students to regular freshman standing and of making it easy to remove such conditions has had a serious effect upon drawing students from high school before the completion of four years' work. It would seem that in most States the time had come when the colleges can justly abolish conditional admission, except for candidates who are deficient in prescribed subjects.

In some of the colleges conditions may warrant the making provision for a subfreshman class. This seems to be the logical solution of the problem where there is a demand for both low entrance requirements and for a full four-year curriculum of college grade. With such a plan it is possible to maintain collegiate standards, and graduates in going to other institutions are eligible to graduate standing. Such a plan also encourages the development of four-year high schools, for students find little advantage in leaving home to complete their preparatory training. There is always a danger, however, in maintaining subfreshman work after the need for it has disappeared, for such a practice is not conducive to the development of a wholesome collegiate atmosphere.

The present study suggests the following principles concerning scholastic requirements for admission:

1. The colleges should exert an influence upon improving the secondary schools in such a way as to enable them to adequately prepare students for colleges to maintain their usefulness for the mass of students who may never enter college.

2. The colleges should prepare or have prepared lists of approved high schools within their States. To facilitate the classification of students from other States, the standards for approval should conform to generally accepted rules.

3. The colleges should accept to regular freshman standing all graduates from approved high schools.

4. The colleges should prescribe work only in such preparatory subjects as are regarded as prerequisite to the freshman work in the college curriculum for which the applicant seeks admission. In this connection it should be understood that the colleges in accrediting or passing upon the qualifications of high schools have an opportunity for prescribing the general qualification of their prospective students.

5. For the guidance of prospective candidates for the degree of bachelor of science in agriculture, each State should publish a statement showing what is believed to be appropriate sequences of studies and an acceptible amount of coordinated work covering the combined high-school and college periods.

6. Students who fail to meet the regular requirements for admission should not be admitted to freshman standing. If admitted con-

ditionally, or to special or irregular classification, they rarely should be permitted to graduate within four years.

7. To maintain collegiate standards in States where four-year high schools are not common, a subfreshman class should be maintained. Admission to such a class should be limited to candidates from communities that do not fully provide for collegiate preparation.

8. Special classification should not be granted to candidates under 21 years of age unless they satisfy regular entrance requirements.

PART III.—REQUIREMENTS FOR GRADUATION.

BASIS FOR COMPARISON.

Since there is considerable variation among the several colleges concerning the methods of awarding collegiate credit, the first consideration in the study of the requirements for graduation is to adopt as nearly as possible a common basis for comparison. In the first place, while all the institutions claim to maintain sessions of 36 weeks, there is apparently considerable variation in the number of working days in the college year. The number ranges, as nearly as is possible to determine by comparing catalogues, from 194 to 216 days. Because of its indefiniteness, this variation has been disregarded in the present comparison.

Secondly, the institutions vary with regard to the number of terms in each session, and this is responsible for a variation in the value of the credit unit. In 40 institutions the session is divided into two terms or semesters. In these institutions one hour of class work per week, or its equivalent, for one semester is the credit unit. In 10 institutions the session is divided into three terms, and in such institutions the unit of credit usually is one hour of class work per week, or its equivalent, for one term. A term-hour credit, therefore, is only two-thirds the value of a semester-hour credit. Correction on this basis has been made in the tables of comparison.

Some exceptions should be noted to the practice of awarding credit on the term-hour and semester-hour basis. In Georgia State College the unit of credit is the year hour, or one hour of class work per week or its equivalent for one session. In the Agricultural College of Utah, although the session is divided into three terms, the unit of credit is the semester hour. In Massachusetts Agricultural College the year's work is divided into four terms, the fourth comes in the summer and therefore does not affect the awarding of credit on the basis of term hours. Similarly, in the New York State College of Agriculture the year is divided into three terms; the third comes in the summer and therefore does not affect the awarding of credit on the basis of semester hours.

Although generally spoken of as an "hour," the recitation period in most institutions is of 50 minutes durations. There are four exceptions to this rule. Alabama Polytechnic Institute and the

Montana College of Agriculture maintain 60-minute recitation periods, and Rutgers College and the Ohio State University maintain 55-minute periods. To make correction for this variation no adjustment has been made. These differences, however, should be kept in mind when making comparisons.

The most significant variation in the credit value of college work is found in the different amounts of laboratory or field work required as equivalent to classroom work. In general one credit hour implies three actual hours of effort on the part of the student. Some institutions conscientiously insist upon this rule. In order to make allowance for the peculiarities of the various courses they require varying amounts of time in attendance at class or in laboratory. In courses like drawing or shopwork, for example, requiring no outside preparation, they demand three actual hours' attendance for each credit. For other courses, like physics, requiring only a small amount of outside preparation, they demand two hours of attendance at class; and for courses like English literature, requiring much outside preparation, they require only one hour in attendance at class.

Apparently, many institutions for the sake of convenience are anxious to maintain a plan for awarding credit that will permit of uniform credit for each kind of class work, whether recitation or practicum, rather than one that will permit of uniformity for each subject. In either case there are bound to be differences in credit value, for more depends upon the exacting requirements of the individual instructor than upon any arbitrary standard based upon class attendance.

Table 8 shows that 20 of the institutions uniformly require two hours of laboratory work for each credit hour. Two institutions uniformly require two and one-half hours as the laboratory equivalent; 10 uniformly require three hours; and 15 require varying amounts ranging from two to three hours. In three institutions there is no differentiation of credit between recitation hours and laboratory hours. The institutions requiring less than three hours may or may not require some outside time in preparation for laboratory work. In many of the institutions requiring varying laboratory equivalents two hours is the normal requirement and excess time required only in certain courses like shopwork and military drill. As a basis of comparison, therefore, the two-hour laboratory equivalent has been adopted in this discussion. At best it is a mere arbitrary standard and does not warrant absolute dependence, but undoubtedly it is more dependable than the use of college credits without adjustment. (See appendix.)

The value of the unit of credit for collegiate work may be much affected by the number of hours per week that students are permitted to carry. From Table 8 it may be seen that many colleges limit the

The following statement summarizes the prescribed requirements for admission:

Distribution of the colleges according to the work prescribed for admission.

Prescribed work.	Number of colleges.	Prescribed work.	Number of colleges.
English	48	History of social science	36
4 units	2	2 units	8
3 units	42	1 unit	28
2 units	4	0 units	12
Modern language	18	Science (including physics)	33
3 units	2	3 units	2
2 units	16	2 units	5
1 unit	0	1 unit	26
0 units	30	0 units	15
Mathematics	48	Physics	9
3½ units	2	1 unit	9
3 units	3	0 units	39
2½ units	16		
2 units	26	Agriculture	1
1½ units	0	1 unit	1
1 unit	1	0 units	47

The total number of prescribed units ranges from 4, required by the University of Missouri, to 10½, as required by both Maryland State College and Rutgers College. The median number of prescribed units is 8. Four institutions require exactly the median number, while 22 require less and 22 require more than this number. This presentation is somewhat misleading on account of the institutions falling naturally into one of two groups—those that do and those that do not require foreign language. In the one case the median number of prescribed units is 9, and in the other case the median number is 7. The accompanying diagram (fig. 1) represents the frequency of the totals prescribed for admission.

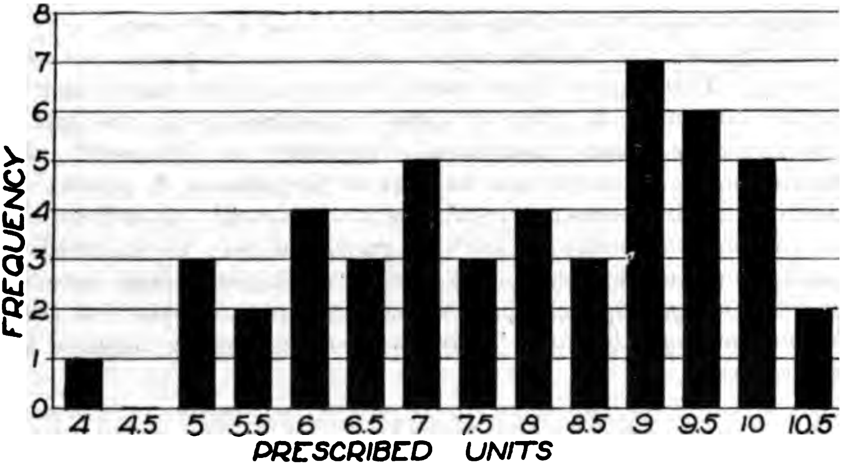

FIG. 1.—Distribution of the agricultural colleges according to the number of prescribed units in their requirements for admission.

OPTIONAL SUBJECTS.

The number of optional units required by the various colleges to satisfy the total requirement is inversely related to the number of prescribed units. The range is from 2½ to 11, and the median number is 6½. The conspicuous feature concerning "optional requirements" is the growing liberality of the institutions, as shown in Table 4, with regard to the number of optional units that may be offered in vocational subjects. In 23 institutions there is practically no limit to the number of optional units that may be offered in vocational subjects. In 15 other institutions four or more units may be offered in vocational subjects. In only 10 cases is the number limited to less than four.

Many of the institutions conspicuously publish the statement that any well-taught, high-school subject may be offered. The following statement of the University of Missouri will serve to show the attitude of a large proportion of the institutions:

> The university will accept for admission any 15 units from a first grade high school. If the distribution of units does not correspond to that recommended by the college to which the student is admitted, he will be required to carry courses in college to make up the deficiency, and this may delay his graduation.

Connecticut Agricultural College has taken an advanced step in granting freshman standing to any graduate of a four-year high school.

Reference to Table 6 will show that there is a great range of high-school subjects that may be offered for entrance. The subjects are arranged in natural groups, and the credit that may be allowed for each is shown as published in the respective catalogues. In certain subjects there is both a maximum and a minimum credit that may be offered. Whenever both are given in the catalogue, they are listed in the table. When only one figure is given for each subject, it is listed as the maximum except where the contrary meaning is obvious. In many cases, it may be regarded also as the minimum. Some catalogues fail to list the credit value of subjects other than those required for admission. In such cases the required amounts are listed in the table, but it may be assumed that credit in excess of these amounts may be allowed.

In Table 7 an attempt is made to show the frequency of occurrence of the subjects appearing upon the published lists of preparatory subjects accepted for admission. The table is presented to show that the more common high-school subjects are quite generally accepted. Forty of the colleges publish fairly complete lists, and taking this number as a basis, it may be seen that all of them accept English, Latin, Greek, French, German, algebra, plane geometry, physics, botany, Greek and Roman history, medieval and modern history, English history, and American history. At

For the junior and senior years the maximum requirement is the same, as for the freshman and sophomore years and the minimum requirement is 27 and 28⅔ hours, respectively. The median requirement for each of these years is 38 and 37 hours, respectively. For the whole four years the distribution of the work from the subject standpoint is shown across the bottom of the table, and the proportionate distribution is shown graphically by figure 2.

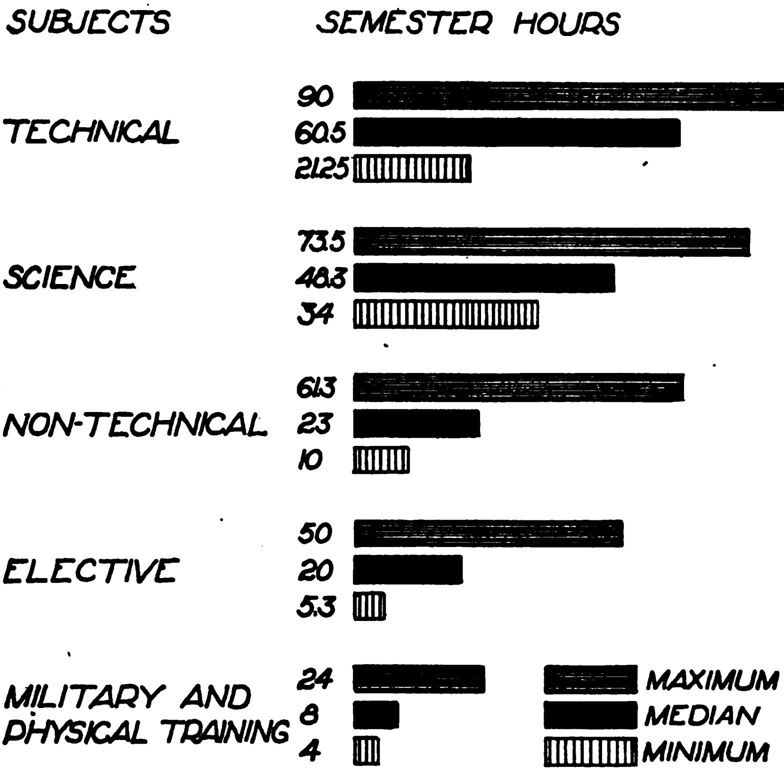

FIG. 2—Distribution and range of the requirements for graduation in agriculture.

Subject distribution.—Since the amount of work required for graduation depends more upon the institution's standard of proficiency than upon the number of hours required in attendance at class, the figures representing total requirements have limited significance. For example, students who have completed the 228 semester hours required by the Virginia Polytechnic Institute may not be any better equipped than those who have graduated from the University of Missouri, with its minimum requirement of 124 semester hours. The value of an analysis of this kind, therefore, is not found in a comparison of total requirements so much as in a comparison of the proportional requirements in the various subjects included in the curriculum.

A summary distribution of the requirements among the various subject groups is shown on a percentage basis in Table 10. The percentage in each case is based upon the total requirement of the institution concerned, as shown in the second column. The subjects are grouped primarily under five heads, and the proportion of work required in each of these main subject groups is shown in the columns of italicised figures. The primary groups are divided into two or more subdivisions, and the sum of the items shown under the several subdivisions should equal the number given as the proportion for the main subject groups. Likewise, the sum of the percentages shown in italics should equal 100. The proportionate requirements in comparison with the average requirement is represented graphically in figure 4. The vertical line in each figure serves to indicate the position of each college in relation to the average requirement.

The mean numbers, as shown at the bottom of Table 10, may be regarded as the average proportions. Collectively, therefore, they represent the average distribution of the work required for graduation in agriculture. These averages in each case have been derived by considering all colleges, even though many of them may not require any work in certain subjects. The results are somewhat different when only such colleges as require work in the subject concerned are included in the calculation. The subjects most seriously affected in this respect are foreign language, mathematics, and social science. The average requirements in each case, including only the institutions requiring the subject, are 6.7, 3.7, and 5.2 per cent, respectively. Figure 3 is intended to represent the average distribution of the requirements for graduation.

Requirements in all subjects.—The total requirements for graduation for the several institutions is shown in Table 10. In the first column of figures is shown the requirement of each college, according to the institution's method of awarding credit. The figures range from 79, as required by Georgia State College, to 468, as required by Virginia Polytechnic Institute. The varying number of terms in each college year, and the varying practice with regard to the laboratory work equivalents, are the chief causes for the conspicuous variation in credit requirements. It is apparent, therefore, that the requirements for graduation, as expressed in terms of college credit, are not comparable.

In the second column of the table is shown, in semester hours, the total requirement for graduation, after correction has been made for varying methods for awarding credit. For convenience, the assumption that two hours of laboratory work are equivalent to one hour of lecture or recitation work has been followed. The totals vary from 124 semester hours, as required by the University of Missouri, to 228 semester hours, as required by Virginia Polytechnic Institute. The mean total requirement, as shown at the bottom of the table, is approximately 165 semester hours. The median total requirement, as shown in Table 11, is 157 semester hours. Compared with the mean total requirement, this represents more nearly the consensus of opinion among the colleges concerning what constitutes a suitable total. It should be observed, however, that the value of the credit units employed here is lower than that of many institutions, and for this reason neither of these figures should be regarded as an appropriate total requirement. The median figure, nevertheless, serves as a basis of comparison for any college of agriculture whose standard of accrediting is similar to that employed here.

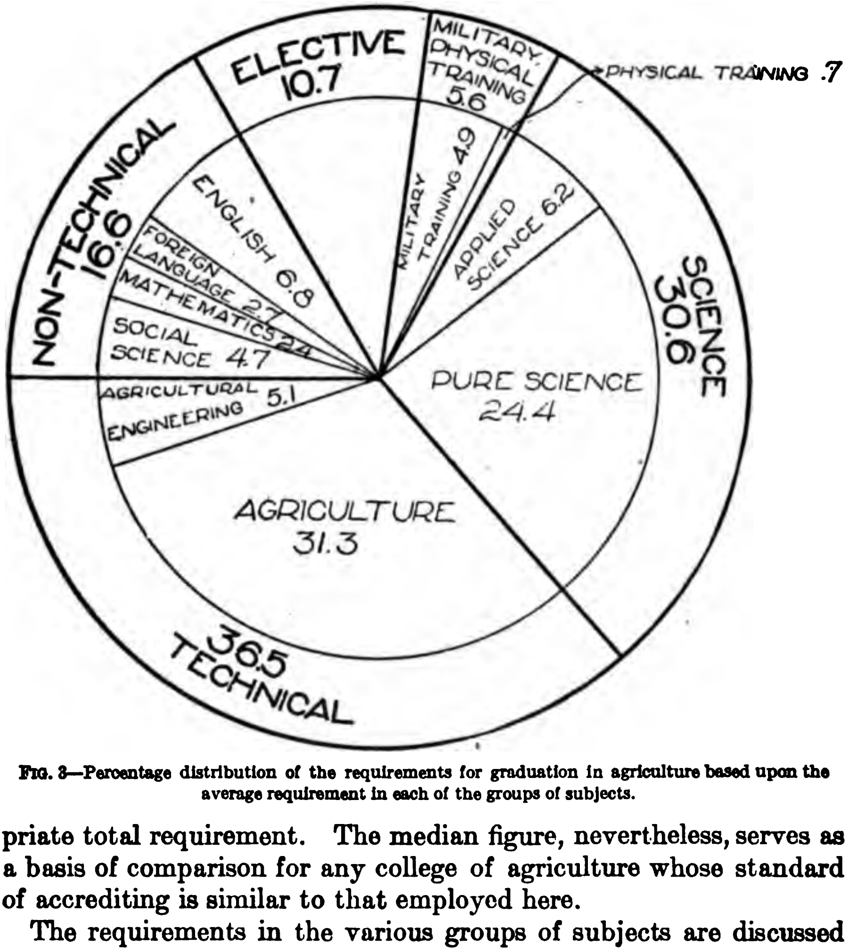

FIG. 3—Percentage distribution of the requirements for graduation in agriculture based upon the average requirement in each of the groups of subjects.

The requirements in the various groups of subjects are discussed separately on the following pages.

REQUIREMENTS IN NONTECHNICAL SUBJECTS.

Under this head are included the requirements in such subjects as English, foreign language, mathematics, history, civil government, economics, rural economics, marketing, sociology, rural sociology, library practice, journalism, psychology, and education.

All of the colleges require some work in nontechnical subjects. The amount ranges from 10 to 61½ hours, with a median requirement of 23 hours. This wide variation is not due to differences in entrance requirements, as might be expected, for the institutions requiring the most work in nontechnical subjects are not those admitting students with less than 15 entrance units. It is true, however, that the institutions with low entrance requirements require relatively high proportions of work in nontechnical subjects. In the freshman year the median requirement is 12 hours, and in each of the other years it is six hours. As shown in Table 10, the proportion of work required by the several colleges in all subjects classed as nontechnical ranges from 6.1 per cent, as required by University of Idaho, to 34.2 per cent, as required by Massachusetts Agricultural College. The average proportion is 16.6 per cent. (See fig. 3.) The colleges more nearly approaching the average are those of California, Florida, Minnesota, Texas, and Wisconsin. The relative proportions of work in nontechnical subjects for the several colleges is represented graphically in figure 4.

English.—Under English are included courses in grammar, composition, rhetoric, literature, library practice, argumentation, public speaking, and journalism. As shown in Table 9, Part I, all of the colleges require one or more courses in this group of subjects. All but one, Iowa State College, require work of this nature in the freshman year; 29 require it in the sophomore year; 16 in the junior year; and 6 in the senior year. The total amount of work required in this subject ranges from 4 to 24 hours, and the median requirement is 10 hours. The proportions of required work in English range from 2.6 per cent, as required by the Ohio State University, to 13.3 per cent, as required by Clemson Agricultural College; and the average proportion, as shown at the bottom of Table 10, is 6.8 per cent. The colleges more nearly approaching the average are those of Connecticut, Delaware, Illinois, Kentucky, Maine, Oklahoma, Pennsylvania, and Washington.

Twenty-eight of the colleges require independent courses in English literature. A few require general courses in English, which include literature. Seventeen colleges require either argumentation or public speaking. These subjects, generally, are required in the freshman or sophomore years, although five colleges require them in either the junior or the senior year. At least five colleges, those of Florida, Iowa, Kansas, Oklahoma, and Rhode Island, require some work in either news writing or journalism.

Foreign language.—Twenty of the colleges include work in foreign language as a requirement for graduation. In the Agricultural College of Utah, English may be taken in place of foreign language, and in North Carolina College and Rhode Island State College military

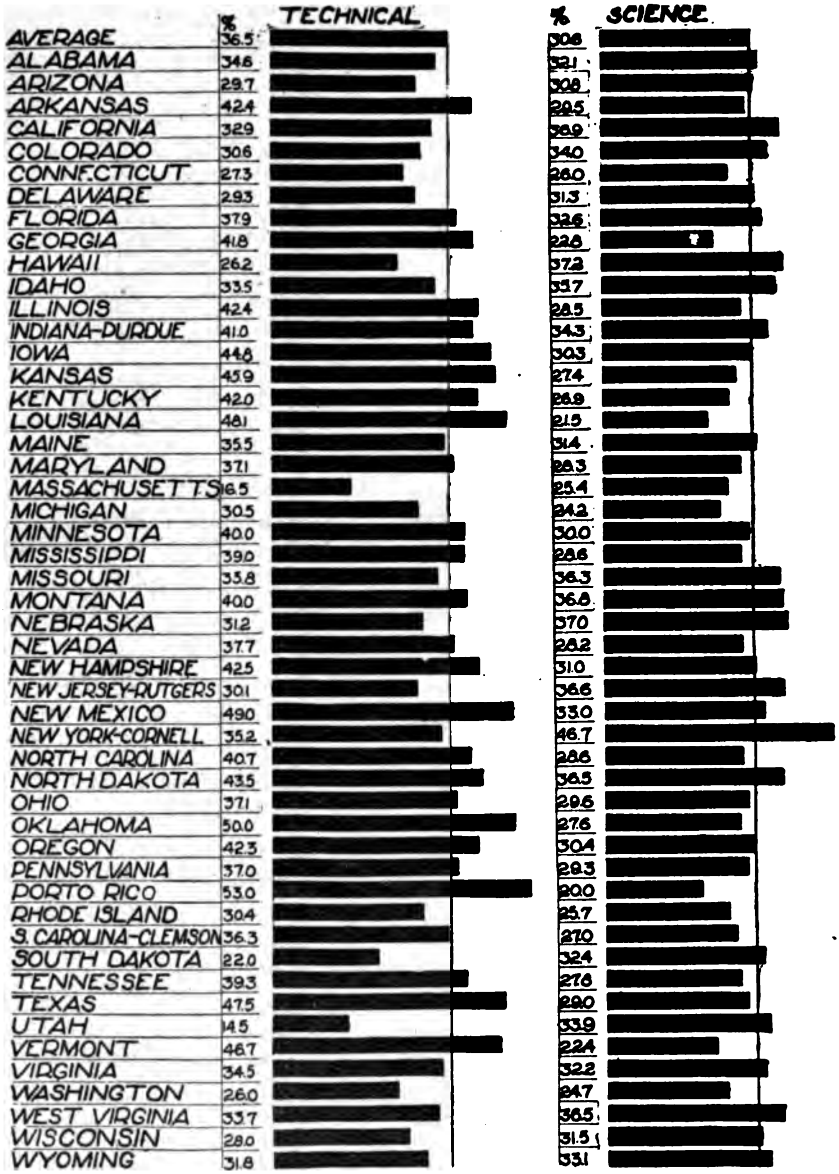

FIG. 4—The variation among the colleges in the distribution of the required work for graduation in agriculture compared with the average distribution.

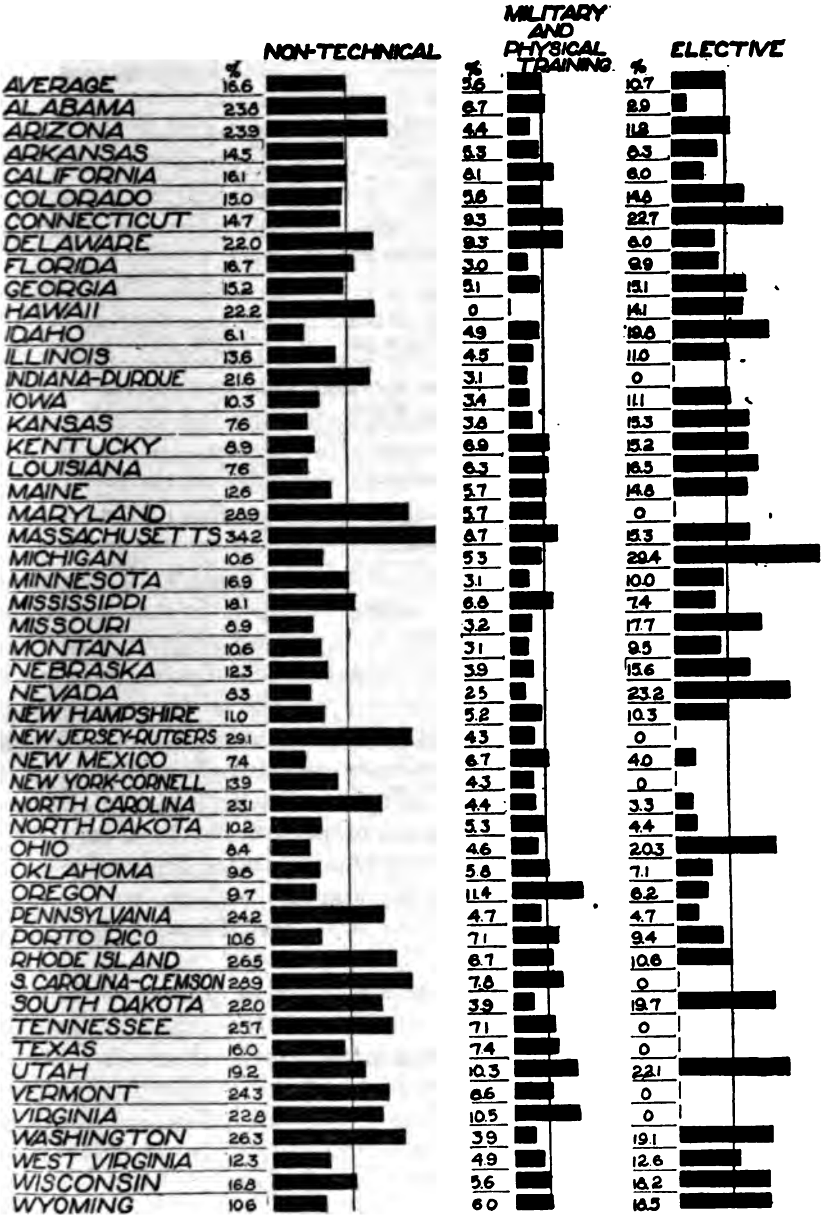

FIG. 4—Continued.

science may be substituted. In five colleges the work is required in a single year, while in the remaining 15 colleges it may be taken in two or more years. Fourteen of the colleges require at least a part of the foreign language work during the freshman year, 12 during the sophomore year, 5 during the junior year, and 4 during the senior year. The total amount of work required in foreign language ranges from 4 to 20 hours, and the median requirement among the colleges prescribing the subject is 12 hours. The proportion of the work required in foreign language ranges from 2.2 per cent, as required by North Carolina College, to 13 per cent, as required by the State College of Washington, and the average proportion is 6.6 per cent. The colleges more nearly approaching the average are those of Arizona, Indiana, Maryland, Pennsylvania, Rhode Island, and Wisconsin. By including in the calculation the colleges that require no foreign language, the average proportion is 2.7 per cent, but in this case the average based upon only those institutions requiring the subject is a better guide as to the most appropriate proportion. It is of interest to note, however, that a majority of the colleges do not require foreign language, and, as previously noted, 23 of them do not require it for either entrance or graduation.

Mathematics.—Thirty-two of the colleges require work in mathematics for graduation. This is preeminently a freshman subject, only six of the colleges requiring it in any other year, and these require it in the sophomore year. The amount of work required in this subject ranges from 1½ to 13⅓ hours and the median requirement is 5 hours. Considering only the colleges requiring the subject, the proportion of work required in mathematics ranges from 1.5 per cent, as required by Maryland State College, to 7.4 per cent, as required by Clemson College; and the average proportion is 3.7 per cent. By including the institutions requiring no mathematics, the average proportion is reduced to 2.4 per cent, and the colleges more nearly approaching the average are those of Arkansas, Delaware, Michigan, New Hampshire, and Rhode Island.

Social science.—Under this head are included all courses in such subjects as history, civil government, economics, rural economics, sociology, and education (including psychology). Forty-five of the colleges list, as a part of their requirements for graduation, at least one course in this group of subjects. Only 12 colleges require this kind of work in the freshman year, and only 5 in the sophomore year. During these years the work comprises mostly history and in a few cases civil government. Industrial history is a common subject. Some form of social science is required in the junior year by 28 colleges and in the senior year by 32 colleges. The median requirement for these two years is five and six hours, respectively. The work consists largely of general economics, rural economics, industrial history, and marketing. In a few institutions work is required in psychology and education.

The total amount of work required in social science subjects ranges from 3 to 22¾ hours, with a median requirement of 8 hours. Considering only the colleges requiring some work in this group of subjects, the proportion ranges from 1.7 per cent, as required by Virginia Polytechnic Institute, to 10.7 per cent, as required by Maryland State College, and the average proportion is 5.2 per cent. By including all of the colleges the average proportion is slightly lower, 4.7 per cent. The colleges more nearly approaching this average are those of Delaware, Nevada, New Hampshire, Rhode Island, South Dakota, and Tennessee.

REQUIREMENTS IN TECHNICAL SUBJECTS.

Under the head of technical subjects are included strictly agricultural subjects, agricultural engineering, farm mechanics, forestry, landscape gardening, and veterinary science. Farm management, including farm accounts, on account of its being given generally in one of the technical departments and because of its intimate relationship with technical agriculture, is classed as agriculture rather than as economics. Regular courses in rural economics are not classed under this head. Courses in genetics, including those in animal breeding and plant breeding, which are given often in conjunction with technical courses, are classed as technical.

Table 11 shows that the total requirements in technical subjects range from 21 to 90 hours, with a median of 60½ hours. (See fig. 2.) With three exceptions in the freshman year, all colleges require work in technical subjects in all years. In the colleges of California, New York, and Utah, a liberal elective system prevails and the taking of technical courses may be deferred until the sophomore year. In practice some of the elective technical courses are likely to be carried during the freshman year.

There is much variation with regard to the amount of technical work required each year. In the freshman year the amount ranges from 2 to 24 hours, and the median requirement is 10 hours. In the sophomore year the requirements range from 3 to 29 hours, with a median of 12 hours. In the junior year the requirements range from 2 to 30 hours, with a median of 15 hours. In the senior year the requirements range from 2½ to 34 hours, with a median of 18 hours. It may be seen that there is a uniform increase in the median requirement from the freshman year to the senior year.

Of the total requirements for graduation, as shown in Table 10, the proportion in technical subjects ranges from 14.5 per cent to 53 per cent. The colleges requiring the lower proportions, according to the present method of analysis, are those of Connecticut, Hawaii, Massachusetts, South Dakota, Washington, and Wisconsin, all of which require less than 30 per cent. These colleges all show a high proportion of elective work, a large part of which, it may be assumed, is likely to be taken in technical subjects. The colleges requiring the higher proportions are those of Kansas, Louisiana, New Mexico, Oklahoma, Porto Rico, Texas, and Vermont, all of which require 45 per cent or over. With one exception, Louisiana, these colleges show a relatively low proportion of elective work, and this, to some extent, accounts for the relatively high showing in technical work. The average proportional requirement in technical subjects is 36.5 per cent, as represented graphically in figure 3. The colleges more nearly approaching the average requirement are those of Alabama, Florida, Maine, Maryland, Mississippi, Nevada, New York, Ohio, Pennsylvania, South Carolina and Virginia. The relative proportion of work in technical subjects for the several colleges is shown graphically in figure 4.

In Tables 10 and 11 the requirements in technical subjects are divided into two groups—agriculture and agricultural engineering. The requirements in the latter group are discussed in regular order, (See p. 48.) The requirements in strictly agricultural subjects range from 21 to 78 hours, with a median of 51 hours. Of the total requirements for graduation, the proportions required in this kind of work range from 14.5 per cent to 46 per cent. The average proportion is 31.3 per cent, and the colleges more nearly approaching the average are those of California, Idaho, Maryland, Minnesota, New York, and West Virginia.

Agronomy and soils.—As shown in Table 9, Part II, the required courses in this group are classed under five heads: (1) Field and forage crops, including judging and testing grain; (2) soils, including soil physics, classification of soils, soil surveying, etc.; (3) soil fertility and management, including fertilizers; (4) farm management, including farm accounts; (5) general or unclassified agronomy, including thesis and seminar requirements. Since this is the major subject selected as a basis for comparing requirements for graduation many courses that are included have been selected to meet the requirements for specialization. In at least 13 of the colleges one or more courses included here may be replaced by other courses, within certain restricted limits. In general, students specializing in agronomy will complete all of the courses offered by that department, and therefore the possibilities for election are limited largely to the selection of the time for taking the work.

In the following discussions, therefore, the comments concerning the year in which the work is required are applicable in general, but are subject to exceptions.

In the colleges, of Hawaii, Nevada, New Hampshire, Porto Rico, Rhode Island, Vermont, and Virginia no opportunity for specialization in agronomy or field crops is offered. In these cases students are required to select an option either of a more general nature, such as general agriculture, or one of a special nature conforming to the demands of the region in which the institution is located. When comparing the requirements in agronomy, therefore, the institutions mentioned above are likely to show a lower proportion of time devoted to this subject and a higher proportion devoted to other technical subjects.

The amount of work required in this group of subjects ranges from 9 to 42 hours, and the median requirement is 25⅓ hours. By eliminating the colleges that offer no opportunity to specialize in this field, as noted above, the minimum requirement is 17 hours, and the median requirement is 27 hours. One-half of the colleges require during the freshman year one or more courses in this group of subjects; 39 require some of the work during the sophomore year; 46 during the junior year, and 48 during the senior year.

Forty-six of the colleges require courses in general *soil work*, and the amount required ranges as high as 13 hours. Only one college requires the work in the freshman year; 24 require it in the sophomore year; 26 in the junior year; and 12 in the senior year.

Thirty-seven colleges require courses classed as *soil fertility and management*. Among these the amount of work required ranges as high as 16 hours, but the median requirement is only 4½ hours. None of the colleges require the work during the freshman year; 10 require it during the sophomore year; 21 during the junior year; and 19 during the senior year.

Courses in *farm management and farm accounts* are required by 43 colleges. Among these the amount of work required ranges as high as 11 hours, and the median requirement is 5½ hours. This is predominantly an upper-class subject, 11 requiring the work in the junior year and 36 in the senior year. The requirements listed by seven colleges for the freshman and sophomore years are generally either survey courses in farm management or courses in farm accounts.

Twenty-three colleges require work classed here as *general agronomy*, which includes the thesis and seminar requirements. In a few cases, only, the work comprises a combination crops and soils course. The amount of work required under this head ranges as high as 10½ hours, and among those requiring such work the median requirement is 4 hours.

Horticulture.—The requirements under this head are grouped into five divisions as follows: (1) Plant propagation, including nursery practice; (2) pomology, or fruit growing; (3) olericulture, or vegetable growing; (4) landscape or ornamental gardening, including in a few instances floriculture; (5) general horticulture.

Nineteen colleges require work in *plant propagation*. Among these the amount ranges as high as 4½ hours, and the median requirement is 3 hours. This is generally given as a freshman subject, nine colleges requiring it in that year. Seven colleges, however, require it in the sophomore year, and three in the junior year.

Pomology is required by 25 of the colleges. Among these the amount ranges as high as 7½ hours, and the median requirement is 3 hours. The work is more generally required in either the sophomore or junior years.

Twenty colleges require *olericulture*, and among these the amount required ranges as high as 6½ hours, but the median requirement is 3 hours.

Landscape or ornamental gardening is required by seven colleges, and among these the median requirement is but 2 hours.

Eighteen colleges require courses classed as *general horticulture*. The amount required ranges as high as 20 hours, but this is the requirement in one of the colleges that do not offer an opportunity for specialization in agronomy, and this amount represents the requirement for the curriculum in general agriculture. By eliminating this institution the maximum requirement is 6 hours and the median requirement is 3 hours. These courses are more generally required in the sophomore year.

Agricultural engineering.—Under this head are included all courses in drawing, shop work or farm mechanics, surveying, irrigation, drainage, farm structures, farm machinery, and other mechanical equipment. As shown in Table 11, 45 of the colleges require one or more courses from this group of subjects. Among these colleges the amount of work required ranges from 3 to 21 hours, and the median requirement is 9 hours. Thirty-two of the colleges require some of such work in the freshman year, 18 require some in the sophomore year, 22 require some in the junior year, and 19 require some in the senior year.

Table 10 shows that of the total requirement for graduation the proportion of work required in agricultural engineering ranges as high as 13.1 per cent, as required by Colorado Agricultural College, and that the average requirement is 5.1 per cent. The colleges more nearly approaching the average are those of Florida, Georgia, Illinois, Louisiana, New York, and North Carolina.

In Table 9, Part III, the courses in agricultural engineering are classified as follows: (1) Farm mechanics (shopwork); (2) farm machinery, including farm motors and engines; (3) rural architecture; (4) irrigation and drainage; (5) surveying and platting; (6) drawing; (7) general (or unclassified) agricultural engineering.

Twenty-three colleges require courses in *farm mechanics or shopwork*. Among these the amount of work required ranges from 1½ to

6 hours, and the median requirement is 3½ hours. Only seven of the institutions require the work in other than the freshman year.

Farm machinery courses are required by 29 colleges, and among these the amount of work required ranges as high as 7 hours, but the median requirement is 3 hours. Five require the work in the freshman year, 8 in the sophomore year, 12 in the junior year, and 8 in the senior year.

Only seven colleges require a separate course in *rural architecture*. Among these the amount of work required ranges from 1 to 4½ hours.

Courses in *irrigation and drainage* are required by 15 colleges. Among these the amount of work required ranges from 1½ to 5½ hours, and the median requirement is 3 hours. Except for two colleges that require the work in the sophomore year, the work is required only of upper classmen.

Twenty-one colleges require a separate course in *surveying*. Among these the requirements range from 1 to 5 hours, and the median requirement is 3 hours. This is predominantly a sophomore subject, although five require it in the freshman year, four in the junior year, and one in the senior year.

For the reason that mechanical and freehand drawing are frequently required in a single course, the subjects are combined in the table. Although separate courses in freehand drawing are sometimes required, the number of such cases does not justify the making of a distinct division. Seventeen colleges require work classed as *drawing* and among these the requirements range from 1 to 5 hours, with a median of 3 hours. Except for three cases, this subject is required in the freshman year.

Ten colleges require courses in either *general agricultural engineering* or in two or more subjects in the classification adopted here. The requirements range as high as 7 hours, and the median requirement is a little over 3½ hours. Seven of the ten colleges require this work in either the junior or senior year.

Genetics.—Under this head are included all distinct courses in animal or plant breeding and in general genetics. Forty-two of the colleges require some work in this group of subjects. Among these the requirements range from 2 to 9 hours, and the median requirement is 4 hours. Eight colleges require distinct courses in *animal breeding*, ranging in amount of work from 1½ to 6 hours. For students specializing in animal husbandry, the proportion of colleges requiring such work is, of course, much higher. Many other colleges require some work in animal breeding, but it appears under other classifications, especially under the head of types and breeds of live stock. Distinct courses in this subject are generally required in either the junior or senior year.

Thirty-one colleges require distinct courses in *plant breeding.* Among these the amount ranges from 1⅓ to 8 hours, and the median requirement is 3 hours. This work is uniformly regarded as an upper-class subject.

Seventeen colleges require at least one course in *general genetics.* Among these the requirements range as high as 6 hours, and the median requirement is 3 hours. This also is regarded generally as an upper-class subject.

Animal husbandry.—In Table 9, Part IV, the courses in this subject are classified as follows: (1) Breeds and types of live stock, (2) feeding and management of live stock, (3) dairy husbandry and dairy industries, (4) poultry husbandry, (5) veterinary science and practice, (6) general (or unclassified) animal husbandry. All colleges but one require at least one course under this classification. The one exception, University of California, specifies that a definite proportion of the elective work must be in agricultural subjects, and undoubtedly all students specializing in agronomy are advised to carry at least one course in animal husbandry.

The total amount of work required in these subjects ranges from 3 to 34 hours, and the median requirement is 14 hours. The work generally is required during the first two years, but many courses, like feeding and management, are required by upper-class men.

Forty-six of the colleges require work in courses classed under *breeds and types of live stock.* Among these the amount ranges from 2½ to 9 hours, and the median requirement is 4⅔ hours. At least one course in the subject is required in the freshman year by 32 colleges, in the sophomore year by 18 colleges, in the junior year by 11 colleges, and in the senior year by 3 colleges.

In *feeding and management of live stock*, 31 colleges require at least one course. Among these the amount of work required ranges from 2 to 9 hours, and the median requirement is 3 hours. The course is required more generally by juniors, 19 colleges so requiring it, but 2 colleges require it in the freshman year, 8 in the sophomore year, and 9 in the senior year.

Dairy husbandry is required by 36 colleges, and among these the amount of work required ranges from 2 to 8 hours, with a median requirement of a little over 3 hours. In 12 colleges the work is required in the freshman year; in 16 it is required in the sophomore year; in 10 the junior year; and in 5 the senior year.

Poultry husbandry is required by 19 colleges. Among these the amount of work required ranges from 1 to 6 hours, and the median requirement is 2½ hours. This subject is required more generally in the sophomore and junior years.

Courses relating to *veterinary practice* are required by 19 colleges. The requirements range from 2 to 9 hours, with a median of 5 hours.

This work also is required more generally during the sophomore and junior years, although 5 colleges require it in the senior year.

In 5 colleges general or unclassified courses in animal husbandry are required. The requirements range from 2 to 6 hours.

Forestry.—In seven colleges two-hour or three-hour courses in forestry are required. Two colleges require it in the freshman year, two in the sophomore year, and three in the senior year.

General agriculture.—In a few colleges general courses in agriculture are required. In others students are required to attend agricultural seminars or to engage in practical farm operations, for which credit is given. In still others certain courses, like "agricultural investigations" and "methods of research in agriculture," are required. In two other colleges a definite amount of work must be selected from among a group of agricultural courses. In such cases and in those mentioned above the requirements have been grouped together under general agriculture. In 16 colleges such work is required, and the amount ranges from 1 to 17 hours.

REQUIREMENTS IN SCIENCE SUBJECTS.

Under the head of science are included all requirements in the strictly science courses, as well as those intimately related to agriculture, such as agricultural chemistry, agricultural botany, soil bacteriology, economic entomology, and plant diseases.

The amount of work required in all science subjects, as shown in Table 11, ranges from 34 to 73½ hours, with a median requirement of 48½ hours. (See fig. 2.) All of the colleges require science in the freshman and sophomore years; 45 require it in the junior year; and 33 require it in the senior year. There is much variation in the amount of science required each year. In the freshman year the requirements range from 2¾ to 24½ hours, while the median requirement is 15½ hours. In the sophomore year the range is from 9 to 32 hours, and the median is 18 hours. In the junior year the range is from 3 to 24 hours, and the median is 12 hours. In the senior year the range is from 3 to 20 hours, and the median is 6 hours.

In some colleges the schedule seems to be overloaded with science in one year, and quite deficient in another year. One institution, calling for but 3 hours during the freshman year, calls for 28 hours in the sophomore year. The curriculum in several institutions calls for three or four heavy science courses during the same year. One curriculum, for example, calls for 10 hours in chemistry, 8 hours in botany, and 6 hours in bacteriology in the freshman year. Another calls for 8 hours in botany, 5 hours in zoology, 13 hours in chemistry, and 6 hours in physics during the sophomore year. In this same institution the science requirements for the four years are 8 hours, 32 hours, 17 hours, and 5 hours, respectively.

As shown in Table 10, the proportion of work required in science subjects by the several colleges ranges from 21.5 per cent, as required by Louisiana State University, to 46.7 per cent, as required by Cornell University. The average proportion, which is represented graphically in figure 3, is 30.6 per cent. The colleges which more nearly approach this average are those of Arizona, Arkansas, Delaware, Iowa, Maine, Minnesota, New Hampshire, Ohio, Oregon, Pennsylvania, and Wisconsin. The relative proportion of work required in science by the several colleges is represented graphically in figure 4.

"Applied" science.—In order to show the proportion of the science requirements which is in subjects closely related to agriculture, such as agricultural chemistry, agricultural botany, agricultural bacteriology, economic entomology, and the like, an arbitrary division of the work has been made in Table 10. The courses in such subjects have been classed as "applied" science and the remaining science courses as "pure" science. There is no well-marked distinction between these two divisions, for much depends upon the teaching methods employed. Furthermore, courses with like content frequently are given different names. A course in plant diseases and their control in one college, for example, may be very similar to a course in plant pathology in another college. For this reason plant pathology is regarded here as agricultural botany and classed as "applied" science. Plant physiology, on the other hand, as it is taught in many colleges, may be as closely related to agriculture as plant pathology, yet it has been classed under pure science. Despite these apparent inconsistencies, the result of such a classification is suggestive. All but three of the colleges require at least one course in applied science. The proportions run as high as 19.3 per cent, as required by Oregon State Agricultural College, and the average proportion is 6.2 per cent. Other colleges requiring high proportions of science courses closely related to agriculture are those of California, Montana, Nebraska, New York, and Wisconsin. Twenty-one of the colleges require at least the average proportion.

Biology.—Under this head are included all required courses in the various phases of botany, including bacteriology, and in zoology and entomology. As shown in Table 9, Part VI, all colleges require some work in this group of subjects. The amount of work required ranges from 8 to 36½ hours, and the median requirement is 23½ hours.

The work in botany is somewhat loosely classified into three divisions—general botany, agricultural and economic botany, and bacteriology. The former includes all phases of the subject except those indicated by the two latter divisions. Forty-seven colleges require some work in *general botany,* and the remaining three require work classed as agricultural or economic botany, which undoubtedly includes several phases of the subject. The amount of work required in general botany ranges as high as 24 hours, and the median requirement in the subject is 9 hours. This is regarded generally as a freshman or sophomore subject, but courses in physiology and histology are required frequently in the junior and senior years. Thirty-three colleges require botany courses in the freshman year, 21 in the sophomore year, 17 in the junior year, and 5 in the senior year.

In 32 of the colleges part of the requirements in biology is listed as *agricultural or economic botany*. On account of the common practice of including under plant pathology the required work in the control of plant diseases, the required courses in this subject have been grouped under agricultural botany. The required work under this head ranges as high as 11½ hours, with a median requirement of 3¾ hours. Four colleges require at least part of such requirement in the freshman year, 7 in the sophomore year, 15 in the junior year, and 14 in the senior year.

Forty-two of the colleges require either general or special work in *bacteriology*. The amount ranges as high as 10½ hours, and the median requirement, among those requiring the subject, is 5 hours. This is regarded generally as an upper-class subject. One college requires it in the freshman year, 12 in the sophomore year, 20 in the junior year, and 15 in the senior year.

Forty-one colleges prescribe at least one course in *zoology*. The amount ranges as high as 10 hours, and among those requiring the subject the median requirement is 4½ hours. This subject usually is required in either the freshman or sophomore year. Ten colleges require it in the freshman year, 26 in the sophomore year, and 6 in the junior year.

Thirty-eight of the colleges require one or more courses in *entomology*. The amount ranges as high as 10 hours, and among those requiring the subject the median requirement of 4 hours. The work is more commonly required in either the sophomore or junior year. Two of the colleges require at least part of the work in the freshman year, 13 in the sophomore year, 19 in the junior year, and 11 in the senior year.

Chemistry.—This subject is required in varying amounts by all of the colleges. The requirement ranges from 8 hours to 32 hours, with a median of 18 hours. The required work in chemistry, as shown in Table 9, Part VI, is classed under five heads, as follows: General or inorganic, qualitative, quantitative, organic, and agricultural.

All of the colleges require *general or inorganic chemistry*. The amount of work required ranges from 3 to 15 hours, with a median of 8¾ hours. Forty colleges require the work in the freshman year; 11 require it in the sophomore year; and in 1 it may be taken in either year.

Twenty-seven colleges require *qualitative analysis* as a distinct course, and a few others apparently require it as a part of the general course in chemistry. The amount of work required ranges from 1½ to 10 hours, and the median requirement, among the colleges prescribing the subject, is 4 hours. This is predominately a sophomore sudject, 18 colleges requiring it in this year; 5 in the freshman year, and 4 in the junior year.

Twenty colleges require *quantitative analysis* as a distinct course, and among these the median requirement is 3⅛ hours. This subject generally is given as a sophomore or junior course. One college requires the work in the freshman year, 8 in the sophomore year, 9 in the junior year, and 2 in the senior year.

Thirty-four colleges require *organic chemistry*, and among these the amount of work required ranges from 1½ to 10 hours, and the median requirement is 3¾ hours. This may be regarded as a sophomore subject. One college requires it in the freshman year, 20 in the sophomore year, 11 in the junior year, and 2 in the senior year.

Thirty-two colleges require *agricultural chemistry*, and among these the requirement ranges from 1½ to 11 hours, with a median of 4 hours. This is predominantly a sophomore subject, being required in that year by 17 colleges, but 1 requires it in the freshman year, 13 in the junior year, and 7 in the senior year.

Physics.—Thirty-six colleges require physics for graduation. Of the 14 that do not require physics, 3 require the subject for admission. In 11 colleges, therefore, students may graduate without having had physics in either high school or college. The amount of work required in physics ranges from 3 to 10 hours, and the median requirement is 6 hours. Eleven colleges require the work in the freshman year, 19 in the sophomore year, and 6 in the junior year.

Geology.—Twenty-nine colleges require geology for graduation. Among these the amount of work required ranges from 2 to 7 hours, and the median requirement is 3 hours. This is predominantly a sophomore subject. In 2 colleges the requirement in geology must be satisfied during the freshman year, in 13 colleges during the sophomore year, in 6 colleges during the junior year, and in 5 colleges during the senior year. In 3 institutions the requirement is divided between two years.

REQUIREMENTS IN MILITARY AND PHYSICAL TRAINING.

All courses in military science and tactics and in physical education, including hygiene and human physiology, are grouped under military and physical training. As shown in Table 9, Part V, an attempt has been made to separate military training from physical education. Since many of the colleges require military courses which include physical education, a study of the combined, rather than the separate, requirements is recommended.

All of the colleges, except that of Hawaii, require work in this group of subjects. The amount required ranges from 4 to 24 hours, and the median requirement is 8 hours. Forty-nine of the colleges require some work in these subjects during both the freshman and sophomore years. Seventeen require some such work during the junior year, and 10 require it during the senior year. In both the freshman and sophomore years the requirements range from 2 to 7 hours, and the median requirements are 4 and 3 hours, respectively. Among those requiring the work during the junior and senior years, the requirements range from 2 to 6 hours, and the median requirement in each year is 3 hours.

On the percentage basis the requirements in military and physical training range from 2.5 per cent, as required by University of Nevada, to 11.4 per cent, as required by Oregon State Agricultural College. The average proportion is 5.6 per cent. (See fig. 4.)

Ten colleges require some work in either personal hygiene or human physiology and 16 require distinct courses in physical education. The requirements in each range from 1 to 4 hours, and the median requirements are 1 and 2 hours, respectively.

REQUIREMENTS IN ELECTIVE WORK.

In most institutions the amount of work required as elective is a definite quantity. In a few colleges, however, a limited number of substitute courses may be taken in place of certain courses in the regular schedule, but such courses are not classed here as elective. In other colleges the elective work is prescribed in such a way as to require a minimum number of hours in technical work, a minimum number in nontechnical, a minimum number in science, and a minimum number as free elective. In cases where the prescription is sufficiently definite, selected courses to meet the requirements have been included in the schedules from which the tables were made and upon which the present discussion is based. In other words, the general and free elective courses only have been classed as elective.

In other cases, where a liberal elective system prevails in place of the major option plan, a selected number of courses have been included to meet the specified requirements for specialization. Such selections have been made, or at least approved, by the colleges concerned. In such cases also the elective work listed in the table usually comprises only a small proportion of the total work shown as elective in the catalogue schedules, or that proportion which may be regarded as free elective. In the Cornell curriculum, for example, the table shows no elective work, while in reality the work of the last two years is wholly elective under the limitations of the advisory system. The outline in this case includes all required work and a selected number of courses recommended for students specializing in farm crops. In the other institutions in which a liberal elective system takes the place of the major option plan a similar adjustment has been made. In a few other institutions the suggested curriculum in each major option is somewhat elastic, and in these it is possible for students to select a combination of courses which may show proportions somewhat different from those shown in the tables.

Since so much variation occurs with regard to the method for determining the amount of work required as elective, a comparison of the colleges from this standpoint is not justified. The actual and percentage proportions of elective work required by the several colleges are indicated in Tables 9 and 10, so that they may be considered in connection with the study of the distribution of the work of each institution.

In actual practice the elective work shown in the tables would be distributed in varying proportions among the several subject groups. In the Michigan Agricultural College, for example, the proportion of required work in each of the subject groups shown in Table 10 is below the average, but, on account of the high proportion of elective work, it may be regarded as very near the average in each group. In Purdue University, on the other hand, all work is prescribed, and for this reason the proportion of work required in each of the main subject groups is higher than the average. A proportionate distribution of the elective work among the various subject groups is not always justified, for in some institutions students are expected to select a large proportion of their elective work from certain groups of subjects. As a rule students select a large proportion of their elective work from among the technical courses. For this reason many of the colleges have prescribed nearly all of the nontechnical work that they expect students to carry and leave a considerable proportion of the science and technical work to be elected.

The question as to how much freedom should be given students in the matter of schedule making is still one of contention. There are extremists in both directions, but there seems to be a movement toward a middle ground. Some institutions prescribe all the work of the four years, and in these the only choice given the student is the selection of a major option. Others prescribe all of the work of the first two years, and at the beginning of the junior year permit students to select a major option in which a portion of the work is pescribed. Some colleges publish tentative schedules for major options which may be modified to suit the individual needs of students. Still others prescribe certain courses that must be taken some time before graduation and permit the students to select additional courses to meet the total requirement. These additional courses sometimes must be selected from certain groups or from the courses given by certain divisions of the institution. In the institutions where the liberal elective system takes the place of the major option plan, students may specialize in any department of the college of agriculture. In some of these cases specialization implies a stated number of credit hours in courses offered by the selected department and sometimes a stated number in closely allied courses. Since the practices of the several colleges with regard to the method of prescribing curricula vary so greatly and because of there being no well-marked lines of distinction between them, no attempt has been made to classify the colleges on this basis.

The student advisory system is becoming more common, and in cases where much freedom is allowed students in the selection of courses to meet the minimum requirements this system generally is in force. It is possible that in many institutions too much freedom prevails in this respect. The student advisory work sometimes is in the hands of junior members of the faculty who may have distorted ideas with regard to the relative value of courses and who too often magnify the work of the department in which they happen to be situated. It is possible that under such conditions suggestive outlines for each line of specialization would serve as a guide to the students and advisers alike.

REQUIREMENTS FOR ADMISSION AND GRADUATION COMBINED.

The average distribution of the required work for the bachelor's degree in agriculture, covering the high school and college curricula combined, is shown in Table 12.

The chief advantage of such a tabulation is found in the opportunity offered to each institution for comparing its distribution of required work with the average distribution. Although somewhat deficient as a basis of comparison, the average distribution may be regarded as the main criterion upon which to estimate the efficacy of the various practices. Since considerable variation exists with regard to whether certain subjects should be studied in the high-school period or the college period, the present table furnishes an opportunity also for determining whether any excess or deficiency requirements for either admission or graduation is balanced up in the total eight-year requirement. For example, an institution with a low mathematics requirement for admission may justify its practice if its total eight-year requirement is equal to the average for the eight-year period. In like manner an institution with a low English requirement for the collegiate period may justify its practice if its total eight-year requirement in English approximates the average.

The remarkable variation in the distribution of the prescribed work for the eight-year period suggests that there is a lack of a clear conception of what should constitute the requirements for a bachelor's degree. As examples, the requirement in English ranges from 8 to 19 per cent of the total requirement, in foreign language from 6 to 11 per cent, in mathematics from 3 to 16 per cent, in social science from 1 to 12 per cent, in science from 10 to 26 per cent, and in technical subjects from 7 to 26 per cent. Since the colleges control an average of 71.6 per cent of the work of the eight-year period, as shown in Table 12, it is extremely important that their requirements represent the most appropriate proportions and sequences.

Some of the variations in the prescribed requirements for the eight-year period may be attributed to the differences in aim of the several institutions. Although statements of aims are frequently quite deficient or entirely wanting, the principal aim of the most of the colleges of agriculture presumably is to train men for the occupation of farming. Many of the colleges, however, place the emphasis upon training for rural leadership and are more concerned in turning out agricultural teachers, agricultural investigators, agricultural engineers, agricultural economists, and agricultural sociologists than in developing farm operatives. The curricula of such colleges usually require a higher proportion of science and "cultural" or nontechnical courses and a corresponding lower proportion of technical courses.

Assuming that the prevailing tendency among the colleges is to turn over gradually to the secondary schools the function of training persons for the occupation of farming and to stress more and more the training for rural leadership, the collegiate curriculum in agriculture is bound to undergo certain modifications. Such a change in function undoubtedly will tend to raise the proportion of work required in science and in nontechnical subjects and to lower the proportion required in technical subjects. The proportionate requirements for the eight-year period, however, may remain quite constant, so far as technical subjects are concerned, for certain technical courses will be pushed back to the high-school period, and thus make way for more work in science and in such nontechnical subjects as rural economics and rural sociology.

If such a tendency exists, the average requirements in science and nontechnical work, as indicated in the table, are too low to meet the needs of the colleges which have adopted this modified function. Many colleges, of course, offer curricula or options for the special purpose of preparing students for the several phases of professional agriculture. The contents of such curricula or options show a wide variation in the same institution. In other words, several institutions offer two or more agricultural curricula, each with a specific aim. This practice, eventually must supersede that in which candidates for professional careers, such as teaching, are obliged to select a specialized curriculum in some phase of technical agriculture. The content of a curriculum for the training of agricultural teachers, of agricultural journalists, and of agricultural sociologists must be quite different from that for the training of farm operatives, and differentiation should begin as early as possible to insure the most appropriate sequence of courses.

It is apparent from the foregoing that in determining appropriate requirements for the degree of bachelor of science in agriculture the work of the eight years, or even 10 years, including possibly the work of the seventh and eighth grades and undoubtedly the preparatory and collegiate requirements, should be studied together. In this connection, as suggested under the discussion of the requirements for admission, there should be made available in each State a statement showing what is believed to be appropriate requirements for a degree in each line of specialization offered by the State-supported higher institutions. Such a statement may show several appropriate sequences in each line of specialization. The suggested sequences in any line necessarily would be similar from the standpoint of distribution among the various types of courses. That is, each sequence would embrace a certain proportion of tool subjects, a certain proportion of pure science subjects, a certain proportion of technical subjects, and so on. Working under such a plan, prospective candidates for the bachelor's degree may select early in their school career an approved sequence which, if completed successfully, should entitle them to a degree at the end of eight years or 10 years, as the case may be. Candidates who change from one sequence to another will understand that they can receive credit only for such completed courses as are applicable to the selected sequence, and those who make radical changes should not expect to graduate within the normal period.

Such a plan also suggests the necessity for establishing credit equivalents for work done in the high school and the college, respectively. That is, a course which may be taken either in the high school or the college should carry a stated amount of credit, depending upon the place in the eight-year period that the course was taken. Some institutions have already established such equivalents. In a few colleges equal credit apparently is given for such courses when carried in high school, but the more common practice is to grant college credit in the proportion of one-half or two-thirds for work done in high school. In other words, for each high-school unit, which from the standpoint of time is equal to 10 semester hours, the practice is to grant college credit to the extent of five or six semester hours.

CONCLUSIONS CONCERNING REQUIREMENTS FOR GRADUATION.

It is not the intention here to suggest arbitrary standards concerning the requirements for graduation. On the contrary, it is believed that the several institutions can serve their constituencies more efficiently if allowed to function independently and unhampered by injected restrictions. The present study, however, has called attention to certain variations in practice which, if eliminated, should beneficially affect the work of the institutions both individually and collectively. Absolute dependence should not be placed upon the tabulations and comparisons. They merely suggest without emphasis many opportunities for individual institutions to modify effectively their present practices. Special attention is called here to the necessity for a more *uniform basis for collegiate credit.* The task on the part of prospective students and of school officials who are called upon to advise prospective students would be facilitated if a uniform basis for awarding collegiate credit were followed by the group of colleges under discussion. This does not infer that all colleges should follow the two-semester plan or that all should follow the three-term plan, for it is an easy matter to change term-hour credits to semester-hour credits. It may be advisable, however, for the colleges that use term hours as their unit of credit to publish a statement concerning the relative value of the two units. By far the larger proportion of the colleges have adopted the two-semester plan and, for this reason, the semester hour seems to be the more acceptable unit.

The most urgent need in this respect is for the adoption of a unit of credit that shall have approximately the same value in all of the agricultural colleges. Such a modification in practice will necessitate concerted action on the part of the several colleges. It will call for a definite understanding with regard to the amount of credit that should be granted for each kind of exercise, and it will be necessary to take into consideration the varying needs of the several subjects from the standpoint of the relative proportion of time necessary for outside preparation. To establish a standard credit unit it will be necessary also to harmonize the practice of the several institutions with regard to the amount of work that students are permitted to carry. This alone will not insure equality in scholarship, but it should tend toward uniformity in quantitative requirements for graduation.

The chief deductions from the study of requirements for graduation follow:

1. The lack of uniformity among the colleges in the method for awarding credit renders difficult the comparison of institutions from the standpoint of the amount of work required for graduation and interferes with the free and just exchange of credit for work done in two or more institutions.

2. The great variation among institutions in their quantitative requirements for graduation indicates that in some institutions there is either a great waste of time or that in others quality of work is sacrificed for quantity.

3. The wide difference of practice with regard to the relative proportion of prescribed and elective work offered by the institutions

shows that the question of freedom of election is still a matter of contention. It would seem that one or the other of these two practices, so widely different in principle, should be superior to the other. To some extent the difference in practice undoubtedly is due to institutional differences. Some institutions that are liberally supported and that maintain rigidly prescribed curricula may find it advantageous to make their courses somewhat more elastic than at present, while others that have adopted the free elective system should guard against such freedom of election that is likely to prevent appropriate concentration of effort or that which is not accompanied by the advice of mature instructors.

4. The variation in practice concerning the placement of courses within the four-year schedule suggests a disagreement among colleges concerning principles of education. The most conspicuous disagreement in this respect is the tendency on the part of some colleges to defer the offering of strictly agricultural courses until the sophomore or even the junior year, while others require such work from the very beginning of the course. There is a growing belief that more technical work should be given early in the curriculum. Reference to Table 9 will show other conspicuous variations in practice in this respect.

5. The uneven distribution in the curriculum of the heavy science courses suggests that in making up schedules some institutions apparently give more attention to classroom and laboratory facilities and to the convenience of instructors than to a careful balancing of the student's work.

6. The variation in the content of the curriculum suggests a lack of a clear concept of what should be required for the bachelor's degree in agriculture. The following tabular statement shows the number of colleges in which it would be possible to graduate without instruction in some of the common subjects as listed:

SUBJECTS NOT REQUIRED.

	Number of colleges.		Number of colleges.
Agricultural botany, including plant pathology	18	Veterinary science and practice	31
Bacteriology	8	Farm management	7
Zoology	9	Fruit growing	25
Entomology	12	Vegetable growing	30
Agricultural chemistry	18	Farm mechanics (shopwork)	27
Organic chemistry	16	Farm machinery	21
Qualitative analysis (distinct)	23	Irrigation and drainage	35
Quantitative analysis	30	Drawing	33
Physics (college grade)	14	Surveying	29
Geology	21	Economics or sociology	6
Genetics (plant or animal breeding)	8	Mathematics (college)	18
Poultry husbandry	31	Foreign language (college)	30
Forestry	43	Foreign language (either college or high school)	23

7. The great variation in the distribution of the required work among the various groups or classes of subjects suggests a divergence of views concerning educational aims. There is a tendency among certain institutions during recent years to emphasize the economic and sociological phases of the training, while others place the emphasis upon technical efficiency. The danger lies in a failure to adapt college curricula to the ever-changing economic conditions.

8. In only a few States is any conspicuous attempt being made to consolidate the curricula of the elementary and preparatory schools with the curriculum of the college in such a way as to suggest appropriate sequences embracing the whole period of training for professional agriculture. Such a consolidation contemplates a single and complete program of instruction covering a period of approximately 10 years instead of two or three quite distinct programs of shorter duration.

9. Many colleges still fail to appreciate the importance of requiring a fair degree of proficiency in practical farm operations.

TABLE 1.—*Form and character of governing boards.*

Institutions.	Governing body.	Total number of members.	Members ex-officio.		Appointed or elected members.			
			Number.	Official position.	Number.	How appointed or elected.	Term, in years.	Political requirements.
Alabama Polytechnic Institute.	Board of trustees	13	2	Governor, State superintendent of education.	11	By governor	12	None.
University of Arizona	Board of regents	10	2	Governor, State superintendent of public instruction.	8	.....do[1]	4	Not more than 4 members may belong to the same party.
University of Arkansas	Board of trustees	9	2	.....do	7	.....do	6	None.
University of California	Regents of the University of California.	23	7	Governor, lieutenant governor, the speaker of assembly, State superintendent of public instruction, president State board of agriculture, president Mechanics Institute, San Francisco, president of the university.	16	.....do[1]	16	Do.
Colorado Agricultural College	State board of agriculture.	10	2	Governor, the president of the college.	8	.....do	8	Do.
Connecticut Agricultural College.	Board of trustees	10	1	Governor (president of board).	9	6 by the senate 2 by the alumni 1 by the State board of agriculture.	4 4 1	Do.
Delaware College	.....do	32	4	Governor, president of State board of education, master of State grange, president of the college.	28	20 by board; 8 by governor.	Life.	Do.
University of Florida	Board of control	5	0		5	By governor	4	Do.
Georgia State College of Agriculture.	Board of trustees	11	0		11	.....do[2]	Life.	Do.
College of Hawaii	Board of regents	5	0		5	.....do	5	Do.
University of Idaho	State board of education and board of regents.	6	1	State superintendent of public instruction.	5	.....do	5	Do.
University of Illinois	Board of trustees	12	3	Governor, superintendent of public instruction, president State board of agriculture.	9	Elected by people	6	Elected on the regular party ticket.
Purdue University (Ind.)	.....do	9	0		9	By governor[3]	6	None.

[1] With the approval of the senate.

[2] Three members must be selected from the board of trustees of the University of Georgia and 3 from board of directors of Georgia Experiment Station.

[3] Two of the members are nominated by the State board of agriculture, 1 by the State board of horticulture, and 1 by Purdue Alumni Association.

TABLE 1.—*Form and character of governing boards*—Continued.

Institutions.	Governing body.	Total number of members.	Members ex-officio.		Appointed or elected members.			
			Number.	Official position.	Number.	How appointed or elected.	Term, in years.	Political requirements.
Iowa State College of Agriculture and Mechanic Arts.	State board of education.	9	0	....	9	By governor[1].........	6	Not more than 5 members may belong to same party.
Kansas State Agricultural College.	Board of administration.	4	1	Governor (chairman)..........	3	.....do[2]..............	4	Appointed without reference to party politics.
University of Kentucky........	Board of trustees......	32	11	Governor, president of university, superintendent of public instruction, commissioner of agriculture, and the seven members of State board of agriculture.	21	15 by governor; 6 by alumni.	6	Board must be bi-partisan.
Louisiana State University and Agricultural and Mechanical College.	Board of supervisors..	15	3	Governor, State superintendent of public instruction, president of the university.	12	By governor..........	4	None.
University of Maine............	Board of trustees......	8	0	....	8	7 by governor......... 1 by alumni[3]..........	7 3	Do.
Maryland State College of Agriculture.	.....do.................	9	0	....	9	By governor..........	9	Do.
Massachusetts Agricultural College.	The corporation.......	18	4	Governor, president of the college, commissioner of education, secretary State board of agriculture.	14	.....do................	7	Do.
Michigan Agricultural College..	State board of agriculture.	8	2	President of college, superintendent of public instruction.[4]	6	Elected by the people.	6	Elected on special ticket.
University of Minnesota........	Board of regents.......	12	3	Governor, superintendent of public instruction, president of university.	9	By governor..........	6	None.
Mississippi Agricultural and Mechanical College.	Board of trustees......	9	2	Governor, State superintendent of public instruction.	7	.....do................	[5] 6	Do.
University of Missouri..........	Board of curators......	9	0	....	9	.....do................	6	Do.
Montana State College of Agriculture and Mechanic Arts.	State board of education.	11	3	Governor, attorney general, State superintendent public instruction.	8	.....do................	4	Do.
University of Nebraska........	Board of regents.......	6	0	....	6	Elected by the people.	6	Elected on party ticket.
University of Nevada..........	.....do.................	5	0	....	5	.....do................	[6] 4	Do.
New Hampshire College of Agriculture and Mechanic Arts.	Board of trustees......	13	2	Governor, president of college.	11	9 by governor; 2 by alumni.	3	Not more than 5 members may belong to the same party.

New Mexico College of Agriculture and Mechanic Arts.	Board of regents							
Cornell University (N. Y.)	Board of trustees	40	8	Governor, lieutenant governor, speaker of assembly, commissioner of education, commissioner of agriculture, president of State agricultural society, president of university, librarian of university.	32	5 by governor 15 by the board 10 by the alumni 1 by bequest[9]	5 5 5 Life.	A majority of the members must not be of the same religious sect.
North Carolina College of Agriculture and Engineering.	do	17	1	Governor	16	By governor	8	None.
North Dakota Agricultural College.	Board of regents	5	0		5	do	6	Do.
Ohio State University	Board of trustees	7	0		7	do	7	Do.
Oklahoma Agricultural and Mechanical College.	State board of agriculture.	5	0		5	4 by governor; 1 elected by people.	4	The president of the board is a salaried official and elected on the party ticket.
Oregon State Agricultural College.	Board of regents	13	4	Governor, secretary of State, superintendent of public instruction, master of State grange.	9	By governor	9	None.
Pennsylvania State College	Board of trustees	31	4	Governor; superintendent of public instruction, president of college, secretary of State board of agriculture.	27	6 by governor, 9 by alumni, and 12 by delegates representing organized agriculture and industry.	3	None.
University of Porto Rico	do	7	3	Commissioner of education (president), speaker of house of delegates, treasurer of Porto Rico.	4	By governor	Indeterminate.	Do.
Rhode Island State College	Board of managers	7	1	State commissioner of public schools.	6	5 by governor 1 by State board of agriculture.	5 2	Do.
Clemson Agricultural College (S. C.).	Board of trustees	13	0		13	6 by governor 7 designated by bequest and are self-perpetuated.	4 Life.	Do.

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[1] With the approval of the senate.
[2] The members of the board are salaried officials.
[3] Nominated by the alumni and appointed by the governor.
[4] Without the voting privilege.
[5] One member is appointed for 4 years only.
[6] One member is appointed for 2 years only.
[7] The constitution also provides for a board of visitors consisting of 21 members, 1 from each county, appointed by the governor, each for a period of 2 years.
[8] Five members are appointed by the board upon nomination of the alumni association.
[9] The eldest lineal male descendant of Ezra Cornell is a trustee during his life.

TABLE 1.—*Form and character of governing boards*—Continued.

Institutions.	Governing body.	Total number of members.	Members ex-officio.		Appointed or elected members.			
			Number.	Official position.	Number.	How appointed or elected.	Term, in years.	Political requirements.
South Dakota State College of Agriculture and Mechanic Arts.	Regents of education	5	0		5	By governor[1]	6	Must be selected from the different political parties of the State.
University of Tennessee	Board of trustees	18	4	Governor, superintendent of public instruction, commissioner of agriculture, president of university.	14	do	12	1 member must be selected from each of the congressional districts and 1 from each of the cities Knoxville and Memphis.
Agricultural and Mechanical College of Texas.	Board of directors	9	0		9	do	6	None.
Agricultural College of Utah	Board of trustees	13	1	Secretary of State	12	do[1]	4	Do.
University of Vermont and State Agricultural College.	do	20	2	Governor, president of university.	18	By the legislature	9 for life. 9 for 6 years.	Do.
Virginia Agricultural and Mechanical College and Polytechnic Institute.	Board of visitors	10	2	Superintendent of public instruction, president of board of agriculture and immigration.	8	By governor	4	Do.
State College of Washington	Board of regents	5	0	([2])	5	do	6	Do.
West Virginia University	Board of control[3]	3	0		3	do[4]	6	Not more than 2 from dominant political party.
	Board of regents	5	1	Superintendent of public free schools.[5]	4	do	4 4	Not more than 3 from dominant political party.
University of Wisconsin	do	15	2	President of university, superintendent of public instruction.	13	do	6	1 member from each congressional district and 2 at large; 2 members must be women.
University of Wyoming	Board of trustees	11	2	President of college, superintendent of public instruction.[6]	9	do[1]	6	None.

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[1] With the approval of the senate.
[2] The president of the college is ex officio secretary of the board without a vote. The governor of the State is regarded as advisory member ex officio.
[3] The business affairs of the university are under the board of control and the academic affairs are under the board of regents.
[4] The members of the board are salaried officers.
[5] The superintendent of public free schools is elected by the people on the regular party ticket.
[6] Without the voting privilege.

[The offering of curricula requiring one or more scholastic years is … of the shorter curricula is indicated by listing the subject and the duration.]

Institutions.	Graduate work.	Four-year curricula.	Three-year curricula.	Two-year curricula.	One-year curricula.	Short curricula.[1]		Summer session.
						Subject.	*Weeks.*	*Weeks.*
Alabama Polytechnic Institute	M. S.	B. S.		Certificate.				6
University of Arizona	M. S.	B. S.		do				0
University of Arkansas		B. S. A.				General agriculture	12	6
University of California	M. S., Ph. D.	B. S.	Certificate.			do	6	6
						Horticulture	6	
						Dairy manufacturing	6	
						Poultry	6	
						Creamery	4	
						Dairy	2	
						Butter	2	
						Cheese	2	
						Tractors	2	
Colorado Agricultural College		B. S.	do					0
Connecticut Agricultural College		B. S.		Certificate.		Dairying	12	6
						Poultry	12	
Delaware College	M. S.	B. S.		do				6
University of Florida	M. S. A.	B. S. A.		G. F.[2]	Certificate.	General agriculture	16	0
						do	2	
Georgia State College of Agriculture	M. S. Agr.	B. S. Agr., B. S. For.			do	do	12	6
						do	2	
College of Agriculture and Mechanic Arts of the Territory of Hawaii.	M. S. A.	B. S.						0
University of Idaho	M. S. Agr.	B. S. Agr.	Certificate.			Dairying	20	6
University of Illinois	M. S., Ph. D.	B. S.				General agriculture	2	8
Purdue University (Ind.)	M. S. A.	B. S. A.				do	8	12
Iowa State College of Agriculture and Mechanic Arts.	M. S. in Agr., M. S. in For.	B. S. in (any major subject).		Certificate.	Certificate.	Dairying	2	6
Kansas State Agricultural College	M. S.	B. S.	Certificate.	do		do	8	9
University of Kentucky	M. S. Agr.	B. S. Agr.				General agriculture	16	0
Louisiana State University and Agricultural and Mechanical College.	M. S.	B. S.				do	2	9
University of Maine	M. S.	B. S.		Certificate.		do	6	6
Maryland State College of Agriculture	M. S.	B. S.		do		do	10	6
Massachusetts Agricultural College	M. S., M. Agr., Ph. D., D. Agr.	B. S.		do		Bee keeping	2	6
						General agriculture	10	

[1] Curricula shorter than 10 days' duration are not listed.

[2] Graduate in farming.

TABLE 2.—*Agricultural curricula offered by the land-grant colleges*—Continued.

[The offering of curricula requiring one or more scholastic years is indicated by listing the corresponding degrees or certificates, and the offering of one of the shorter curricula is indicated by listing the subject and the duration.]

Institutions.	Graduate work.	Four-year curricula.	Three-year curricula.	Two-year curricula.	One-year curricula.	Short curricula.		Summer session.
						Subject.	*Weeks.*	*Weeks.*
Michigan Agricultural College	M. S., M. Agr., M. Hort., M. For.	B. S		Certificate		General agriculture	8	6
University of Minnesota	M. S., Ph. D	B. S	Certificate.			Dairying	4	6
						Traction engine	5	
Mississippi Agricultural and Mechanical College.	M. S. A	B. S		Certificate.				6
University of Missouri	M. F., A. M., Ph. D	B. S. in Agr., B. S. in For.		do		Creamery	7	8
Montana State College of Agriculture and Mechanic Arts.	M. S	B. S	Certificate.					6
University of Nebraska	M. S., Agr. Eng., M. S. in Agr. Eng., Ph. D.	B. S		Certificate.				8
University of Nevada	M. S	B. S				General agriculture	10	6
New Hampshire College of Agriculture and Mechanic Arts.	M. S	B. S		Certificate.		Dairying	5	0
Rutgers College (N. J.)	M. Sc., Ph. D	B. S				Dairy farming	12	
						Horticulture	12	
						Poultry	12	
						Bee husbandry	12	
New Mexico College of Agriculture and Mechanic Arts.	M. S	B. S				General agriculture	6	0
Cornell University (N. Y.)	M. S. A., M. S. For., M. L. D.,[1] Ph. D.	B. S				do	12	6
						Dairy	12	
						Poultry	12	
						Fruit	12	
						Flowers	12	
						Vegetables	12	
North Carolina College of Agriculture and Engineering.	M. S	B. S		Certificate.	Certificate.	General agriculture	4	4
North Dakota Agricultural College	M. S	B. S	Certificate.			do	10	0
Ohio State University	M. S., Ph. D	B. S	do			do	8	0
						Dairying	8	
						Poultry	8	
Oklahoma Agricultural and Mechanical College.	M. S	B. S	do					8
Oregon State Agricultural College	M. S	B. S			Certificate.	Forestry	20	6
						General agriculture	4	
Pennsylvania State College	M. S	B. S		Certificate.		do	12	6
University of Porto Rico		B. S	Certificate.					0
Rhode Island State College	M. S	B. S		Certificate.		Poultry	6	0

Clemson Agricultural College (S. C.)		B. S			Certificate.	General agriculture	[2] 4	4
						Cotton grading	[2] 4	
						Corn growing	[2] 4	
South Dakota State College of Agriculture and Mechanic Arts.	M. S	B. S	([3])			Creamery	12	6
						Traction engine	20	
University of Tennessee	M. S. A	B. S. A				General agriculture	8	6
Agricultural and Mechanical College of Texas	M. S. in Agr	B. S		Certificate.		Cotton classing	6	0
						Butter making	2	
Agricultural College of Utah		B. S		do		General agriculture	18	6
University of Vermont and State Agricultural College.	M. S	B. S				do	5	6
						Creamery	4	
Virginia Agricultural and Mechanical College and Polytechnic Institute.	M. S	B. S		Certificate.		General agriculture	4	6
State College of Washington	M. S	B. S				do	6	6
West Virginia University	M. S. Agr	B. S. Agr						6
University of Wisconsin	M. S., Ph. D	B. S		Grad. Agr.		Dairy manufacturing	12	6
				Certificate.		Dairying	10	
University of Wyoming	M. S	B. S		Certificate.				6

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[1] Master landscape design.

[2] Given during the summer.

[3] A secondary curriculum covering four years of five months each, leading to a certificate.

TABLE 3.—*Major options and opportunities for specialization in the four-year agricultural curricula.*[1]

[Each opportunity for specialization is represented by a cross ×.]

Institutions.	Agriculture (general).	Agricultural education.	Agricultural engineering or farm mechanics.	Agricultural journalism.	Agronomy or farm crops.	Animal husbandry.	Bacteriology or microbiology.	Biology or economic biology.	Botany or plant pathology.	Chemistry or agricultural chemistry.	Dairy husbandry.	Dairy industries.	Entomology or zoology.	Farm management.	Floriculture.	Forestry.	Genetics or plant breeding.	Horticulture.	Landscape gardening.	Olericulture or vegetable gardening.	Pomology or fruit growing.	Poultry husbandry.	Rural economics, markets, etc.	Soils and fertilizers.	Veterinary science.	Miscellaneous.
Alabama Polytechnic Institute					×	×			×	×						×		×								
University of Arizona			×		×	×		×		×								×					×			
University of Arkansas		×			×	×												×								×
University of California[1]		×	×		×	×			×	×		×	×		×	×	×		×	×	×	×	×	××	×	×××
Colorado Agricultural College					×	×							×			×		×								
Connecticut Agricultural College		×			×		×		×	×	×															
Delaware College					×	×												×								
University of Florida		×			×	×				×								×								
Georgia State College of Agriculture			×		×	×				×								×								
College of Agriculture and Mechanic Arts of the Territory of Hawaii	×																									×
University of Idaho					×	×					×							×								
University of Illinois[1]	×	×	×		×	×			×	×	×		×	×	×			×	×	×	×		×	×		
Purdue University (Ind.)	×	×			×	×				×	×				×			×		×		×				
Iowa State College of Argiculture and Mechanic Arts		×	×		×	×					×	×		×	×	×			×	×	×	×			×	
Kansas State Agriculture College			×		×	×					×							×				×			×	×
University of Kentucky					×	×	×		×	×	×		××					×								
Louisiana State University and Agricultural and Mechanical College		×			×	×					×					×		×							×	
University of Maine					×	×		×			×					×		×				×				
Maryland State College of Agriculture		×	×		×	×		×			×							×								×
Massachusetts Agricultural College	×	×		×	×	×	×		×	×	×		×		×	×			×		×	×	×			×
Michigan Agricultural College					×	×					×					×		×	×		×	×		×		×
University of Minnesota		××			×	×			×	×	×		×			×		×					×	×		×××
Mississippi Agricultural and Mechanical College			×		×	×	×		×	×	×		×	×				×				×	×		×	
University of Missouri					×	×				×	×					×		×	×					×		
Montana State College of Agriculture and Mechanic Arts		×			×	×					×							×								
University of Nebraska			×		×	×			×	×	×		×	×				×								
University of Nevada			×		×	×																				
New Hampshire College of Agriculture and Mechanic Arts		×				×										×		×								
Rutgers College (N. J.)											×			×						×	×	×		×		
New Mexico College of Agriculture and Mechanic Arts					×	×												×								

Cornell University (N. Y.)[1]		×	×		×	×			×	××		×	×	×	×	×	×		×	×	×	×	×	×		××
North Carolina College of Agriculture and Engineering		×			×	×												×				×			×	
North Dakota Agricultural College	×	×			×	×			×	×	×							×								
Ohio State University[1]		×	×		×	×			×		×		×		×	×			×	×	×		×	×		
Oklahoma Agricultural and Mechanical College					×	×					×							×								
Oregon State Agricultural College	×	×	××		×	×	×		×	×	×	×	××		×					×	×	×		×	×	
Pennsylvania State College		×			×	×			×	×	×					×		×	×							
University of Porto Rico	×	×																								
Rhode Island State College	×					×		×		×								×								
Clemson Agricultural College (S. C.)					×	×			×	×	×		×					×						×	×	
South Dakota State College of Agriculture					×	×					×							×								
University of Tennessee		×	×		×	×			×	×	×		×					×							×	
Agricultural and Mechanical College of Texas		×	×		×	×		×		×	×		×					×	×							
Agricultural College of Utah					×	×	×		×	×	×		×					×							×	
University of Vermont and State Agricultural College		×																								××
Virginia Agricultural and Mechanical College and Polytechnic Institute	×		×															×							×	
State College of Washington	×				×	×					×							×	×			×		×		
West Virginia University		×			×	×					×		×	×						×	×	×		×		
University of Wisconsin[1]		×	×	×	×	×	×		×	×	×		×				×	×				×	×	×	×	
University of Wyoming					×	×																				
Frequency	10	25	17	2	43	44	7	5	18	24	31	4	17	7	8	14	3	36	11	9	10	15	9	13	12	10

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[1] In the tabulations, separate agricultural curricula, major options, and opportunities for specialization are counted. In a few institutions, through a liberal elective system, opportunity for specialization is offered in any phase of agriculture in which instruction is offered.

TABLE 4.—*Requirements for admission.*

Institutions.	Age requirements.		Scholastic requirements.													Conditional admission.	
				Prescribed units.										Optional units.			
	For regular students.	For special students.	Entrance units required.	English.	Foreign language.	History or social science.	Algebra.	Geometry.	Advanced arithmetic.	Mathematics.	Physics.	Science.[1]	Total prescribed units.	Total optional units.	Units accepted in vocational subjects.	Number of deficient units approved.	Time for removal of conditions (years).
Alabama Polytechnic Institute	[2] 15	21	14	3	......	1	1½	1½	½	......	......	......	7½	6½	(3)	2	2
University of Arizona	16	21	15	3	......	1	1½	1	......	......	......	1	7½	7½	(3)	2	2
University of Arkansas	(4)	18	14	3	......	1	1½	1	......	......	......	1	7½	6½	4	2	1
University of California	16	21	15	2	2	1	1	1	......	......	......	2	9	6	3	(4)	2
Colorado Agricultural College	(4)	(4)	15	3	......	2	......	......	......	2	1	1	9	6	(3)	(5)	......
Connecticut Agricultural College	16	21	(6)	......	......	......	......	......	......	......	......	......	......	......	......	(6)	......
Delaware College	16	19	14	3	2	1	1½	1	......	......	......	1	9½	4½	(3)	2	(4)
University of Florida	16	21	16	3	[7] 2	1	2	1	......	......	......	1	10	6	4	2	1
Georgia State College of Agriculture	16	20	14	3	2	2	1½	1	......	......	......	......	9½	4½	(3)	[8] 2	(4)
College of Agriculture and Mechanic Arts of the Territory of Hawaii	(4)	18	15	3	......	......	......	......	......	2½	1	......	6½	8½	(3)	[9] 1	1
University of Idaho	16	21	15	3	......	1	1	1	......	......	......	[10] 1	7	8	4	1	2
University of Illinois	16	21	15	3	......	......	1	1	......	......	......	2	7	8	3	[11] 1	1
Purdue University (Ind.)	16	21	15	3	2	1	1½	1	......	......	1	......	9½	5½	1	(12)	......
Iowa State College of Agriculture and Mechanic Arts	16	21	15	3	......	1	1½	1	......	......	......	......	6½	8½	4	1	1
Kansas State Agricultural College	14	21	15	3	......	......	1	1	......	......	1	......	6	9	(3)	1	1
University of Kentucky	(4)	21	15	3	2	1	1½	1	......	......	......	1	9½	5½	2	2	1
Louisiana State University and Agricultural and Mechanical College	16	20	14	3	......	1	1½	1	......	......	......	......	6½	7½	(3)	2	1
University of Maine	(4)	21	14½	3	2	1	1½	1	......	......	......	1	9½	5	4	......	......
Maryland State College of Agriculture	(4)	(4)	15	3	[13] 2	2	1½	1	......	......	1	......	10½	4½	(3)	3	1
Massachusetts Agricultural College	16	18	14	3	2	1	1½	1	......	......	......	......	8½	5½	2	2	4
Michigan Agricultural College	15	(4)	15	3	......	......	1	1	......	......	......	......	5	10	7	[14] 2	(4)
University of Minnesota	(4)	21	15	[15] 4	......	......	1	1	......	......	......	......	6	9	4	[14] 1	(4)
Mississippi Agricultural and Mechanical College	16	20	12	2½	......	1	1	1	......	......	......	......	5½	6½	(3)	[16] 1	(4)
University of Missouri	(4)	21	15	3	......	......	1	......	......	......	......	......	4	11	4	(4)	1
Montana State College of Agriculture and Mechanic Arts	16	21	15	3	......	1	......	......	......	2	......	1	7	8	(3)	2	1
University of Nebraska	(4)	21	15	3	......	......	......	......	......	2	......	1	6	9	4	1	½

University of Nevada	(4)	20	15	3	......	1	......	......	......	2½	......	2	8½	6½	(3)	2	1
New Hampshire College of Agriculture and Mechanic Arts	(4)	(4)	15	3	......	1	1	1	......	......	......	1	7	8	4	[11]1	(4)
Rutgers College (N. J.)	(4)	......	15	3	2	1	2	1½	......	......	......	1	10½	4½	½	2	1
New Mexico College of Agriculture and Mechanic Arts	(4)	(4)	15	4	......	2	1	1	......	......	......	1	9	6	(3)	2	1
Cornell University (N. Y.)	[2]16	[17]21	15	3	3	1	1	1	......	......	......	......	9	6	4	[14]1	1
North Carolina College of Agriculture and Engineering	16	16	11	3	......	2	1½	1	......	......	......	1	8½	2½	(3)	......	......
North Dakota Argicultural College	(4)	(4)	15	3	3	[18]1	......	......	......	2	......	1	10	5	(3)	3	1
Ohio State University	(4)	21	15	2	2	1	......	......	......	2	1	......	8	7	5	1	1
Oklahoma Agricultural and Mechanical College	16	21	15	3	......	1	1	1	......	......	......	1	7	8	(3)	1	2
Oregon State Agricultural College	16	18	15	3	......	......	1	1	......	......	......	......	5	10	(3)	(14)	1
Pennsylvania State College	(4)	21	15	3	2	1	1	1	......	......	......	2	10	5	(3)	......	......
University of Porto Rico	(4)	(4)	14	......	......	......	......	......	......	......	......	......	......	......	......	(4)	......
Rhode Island State College	(4)	(4)	14	3	2	1	1	1	......	......	1	......	9	5	2	1	(4)
Clemson Agricultural College (S. C.)	16	(4)	12	3	......	1	......	......	......	3	......	1	8	4	(3)	......	......
South Dakota State College of Agriculture and Mechanic Arts	14	(4)	15	3	[19]2	2	1	1	......	......	1	......	10	5	3	1	1
University of Tennessee	16	21	14	3	......	......	......	......	......	2	......	3	8	6	4	2	1
Agricultural and Mechanical College of Texas	16	21	14	3	......	......	1½	1	......	......	......	......	5½	8½	4	2	2
Agricultural College of Utah	(4)	(4)	[20]16	3	......	1	......	......	......	2	......	3	9	7	(3)	(14)	4
University of Vermont	16	(4)	14½	3	2	1	1½	1	......	......	......	1	9½	5	2	2	1
Virginia Agricultural and Mechanical College and Polytechnic Institute	16	......	14	3	......	2	1½	1½	......	......	......	......	8	6	(3)	2	2
State College of Washington	16	[17]23	15	3	......	......	......	......	......	[21]2	......	......	5	10	4	1	1
West Virginia University	(4)	21	15	3	2	1	1	1	......	......	......	1	9	6	3	2	1
University of Wisconsin	(4)	21	14	2	2	......	1	1	......	......	......	......	6	8	4	[3]2	1
University of Wyoming	(4)	(4)	15	3	2	2	1½	1½	......	......	1	......	10	5	(3)	2	1

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[1] In some cases agriculture is accepted as science.

[2] Women students must be at least 17 years of age.

[3] Practically no limit to the number of elective units that may be offered in vocational subjects.

[4] No stated limit, or each case is considered on its own merits.

[5] Students who are deficient in entrance units may enter the "school of agriculture" where opportunity to make up deficiencies is afforded.

[6] Entrance requirements are not based upon high-school units.

[7] History and science may be offered in place of a foreign language.

[8] Applicants presenting a total of 14 units, but deficient in foreign language, may be admitted.

[9] Only applicants deficient in physics are admitted with conditions.

[10] Agriculture may be included.

[11] Applicants must present a total of 15 units, including 3 in English, 1 in algebra, 1 in geometry, and 1 in science.

[12] Applicants are accepted conditionally "only in exceptional cases."

[13] Agriculture may be substituted for foreign language.

[14] Applicants who meet the total requirements, but who are deficient in some of the prescribed work, may be admitted conditionally.

[15] Four units of foreign language may be substituted for the fourth unit of English.

[16] Only applicants deficient in geometry are admitted with conditions.

[17] Applicants who meet regular entrance requirements are admitted at 16 years of age.

[18] A great variety of combinations of these units may be accepted. The English requirement is fixed, but three units may be offered in any one of the other four required subjects; and two units may be offered in any one of the remaining three subjects; and one unit in each of the remaining two subjects.

[19] Required only of candidates from schools where the subject is taught.

[20] One unit for approved occupational experience may be offered.

[21] One unit in physical science may be offered in place of the second unit of mathematics.

TABLE 5.—*Comparing the 1912–13 requirements for admission with those of 1917–18.*

Institutions.	Years of high-school work.		Entrance units.		Prescribed units.	
	1912-13	1917-18	1912-13	1917-18	1912-13	1917-18
Alabama Polytechnic Institute	3	4	12	14	7	7½
University of Arizona	4	4	15	15	10	7½
University of Arkansas	4	4	13	14	8	7½
University of California	4	4	15	15	10	9
Colorado Agricultural College	4	4	15	15	9	9
Connecticut Agricultural College	2	4	8	14	....	....
Delaware College	2½	4	10	14	9½	9½
University of Florida	3	4	12	16	10	10
Georgia State College of Agriculture	4	4	14	14	7½	9½
College of Agriculture and Mechanic Arts of the Territory of Hawaii	4	4	15	15	10	6½
University of Idaho	4	4	15	15	9½	9
University of Illinois	4	4	15	15	7½	7
Purdue University (Ind.)	4	4	15	15	9½	9½
Iowa State College of Agriculture and Mechanic Arts	4	4	15	15	8½	6½
Kansas State Agricultural College	2	4	8	15	5	6
University of Kentucky	4	4	15	15	9½	9½
Louisiana State University and Agricultural and Mechanical College	4	4	14	14	6½	6½
University of Maine	4	4	14	14½	9½	9½
Maryland State College of Agriculture	1½	4	6	15	6	10½
Massachusetts Agricultural College	4	4	14	14	9	8½
Michigan Agricultural College	4	4	15	15	7	5
University of Minnesota	4	4	15	15	6	6
Mississippi Agricultural and Mechanical College	1	2½	5	10	3	5½
University of Missouri	4	4	15	15	4	4
Montana State College of Agriculture and Mechanic Arts	4	4	15	15	10	7
University of Nebraska	4	4	15	15	8½	6
University of Nevada	4	4	15	15	4	8½
New Hampshire College of Agriculture and Mechanic Arts	4	4	15	15	11½	7
Rutgers College (N. J.)	3+	4	14	15	11	10½
New Mexico College of Agriculture and Mechanic Arts	4	4	15	15	10	9
Cornell University (N. Y.)	4	4	15	15	9	9
North Carolina College of Agriculture and Engineering	1	3	4	11	3	8½
North Dakota Agricultural College	4	4	14	15	8	10
Ohio State University	3	4	12	15	10	8
Oklahoma Agricultural and Mechanical College	2	4	8	15	8	7
Oregon State Agricultural College	2	4	9	15	4½	5
Pennsylvania State College	4	4	14	15	12	10
University of Porto Rico	4	4	14	14	7½	....
Rhode Island State College	4	4	14	14	8½	9
Clemson Agricultural College (S. C.)	2	3	8	11	8	7
South Dakota State College of Agriculture and Mechanic Arts	4	4	14	15	10	8
University of Tennessee	4	4	14	14	8	8
Agricultural and Mechanical College of Texas	1	4	4	14	4	5½
Agricultural College of Utah	3	4	11	16	....	9
University of Vermont and State Agricultural College	4	4	14½	14½	9½	9½
Virginia Agricultural and Mechanical College and Polytechnic Institute	2½	4	10	14	7	8
State College of Washington	4	4	15	15	7½	6
West Virginia University	4	4	14	15	9	9
University of Wisconsin	4	4	14	14	6	6
University of Wyoming	4	4	15	15	9½	10
Median	4	4	14	15	8½	8

TABLE 6.—*Maximum and minimum entrance credit allowed for the various high-school subjects.*

[Whenever the credit value is expressed by one figure only, it is listed in the maximum column, except where the contrary meaning is obvious.]

Institutions.	Language.																Mathematics.												Natural science.																	
	English.		Latin.		Greek.		French.		German.		Spanish.		Other languages.		Nonspecified foreign languages.		Algebra.		Plane geometry.		Solid geometry.		Trigonometry.		Advanced algebra.		Nonspecified mathematics.		Physiography and geology.		Physics.		Chemistry.		Botany.		Zoology.		Physiology.		General biology.		General science.		Nonspecified science.	
	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.
Alabama Polytechnic Institute		3	4	1	2	1	2	1	2	1	2	1					1½		1		½		½						½		1	½	2	½	1	½	1	½	1	½	1	½				
University of Arizona		3	4	2	2		2		2		2						1½		1		½								1	½	1		1		1	½										
University of Arkansas	4	3	4	1	3	1	4	1	4	1	2	1					1		1		½		½		½				1	½	1	½	1	½	1	½	1	½	1	½	1	½	1	½		
University of California	4	2	5	1	3	1	4	1	4	1	4	1					1		1		½		½		1	½			1		1		1		1		1		1				1			
Colorado Agricultural College	5	3	4	1	3	1	3	1	3	1	2	1																2			1		1										2			
Connecticut Agricultural College[1]																																														
Delaware College		3	4	1	4	1	4	1	4	1							1½		1		1		½						1	½	1		1		1		1		½							
University of Florida	4	3	4	1			2	2	2	2	2	2					1		1		½		½		1				1		1		1		1	½	1	½								
Georgia State College of Agriculture	4	3	4	1	3	1	2	1	2	1	2	1					1		1		½		½		1	½			1	½	1	½	1		1	½	1	½	½		1		1			
College of Agriculture and Mechanic Arts of the Territory of Hawaii		3													(2)													2½																	(2)	
University of Idaho		3	2	2			2	2	2	2	2	2					1		1		½				½						1		1		1		1									
University of Illinois	4	3	4	1	3	1	4	1	4	1	4	1	4	1			1		1		½		½		½				2	½	2	1	2	1	1	½	1	½	1	½						
Purdue University (Ind.)	4	3	4	1			3	1	3	1							1		1		½		1	½	½				1	½	1		1		1		1		1	½						
Iowa State College of Agriculture and Mechanic Arts	4	3	4	1	4	1	4	1	4	1	4	1					1½		1		½		½		½				1	½	1		1		1	½	1	½	½							
Kansas State Agricultural College	4	3	4	1	4	1	4	1	4	1	4	1					1½	1	1		½		½		½				1	½	1		1		1	½	1	½	1	½	1	½	1	½		
University of Kentucky	4	3	4	1	3	1	2	1	3	1	3	1					1½		1		½		½						2	½	1		1	½	1	½	1	½	1	½						
Louisiana State University and Agricultural and Mechanical College		3	3	1	1		3	1	3	1	3	1					1½		1										1	½	1	½	1	½	1	½	1	½								
University of Maine		3	4	2	3	2	4	2	4	2	4	2					1½		1		½		1		½				1	½	1		1		1		1		½		1					
Maryland State College of Agriculture		3	2	1			2	1	2	1	2	1					1		1		½		½		½				1		1		1		1		½		½							
Massachusetts Agricultural College	4	3	3	2	3	2	4	2	4	2							1½	1½	1	1	½	½	½	½					1	1	1	1	1	1	1	½	½	½	½	½						
Michigan Agricultural College	4	3	4	2	4	2	4	2	4	2	4	2					1	1	1	1	½	½	½	½	½	½			1	½	1	1	1	1	1	½	1	½								
University of Minnesota	4	3	4	1	4	1	4	1	4	1	4	1	4	1			1		1		½		½		½				1	½	1		1		1	½	1	½	½							
Mississippi Agricultural and Mechanical College	3	2½	3	1	2	1	2	1	2	1	2	1					1	1	1	1					1				(2)		(2)		(2)		(2)		(2)		(2)							
University of Missouri	4	3	4	2	3	2	3	2	3	2	3	2					1½	1	1	1	½	½	½	½	½	½			1	1	2	1	2	1	2	1	2	1	1	1	1	1				
Montana State College of Agriculture and Mechanic Arts		3													(2)												(2)	2																	(2)	1

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[1] The Unit credit system is not employed.

[2] Units to be determined.

TABLE 6.—*Maximum and minimum entrance credit allowed for the various high-school subjects*—Continued.

[Whenever the credit value is expressed by one figure only, it is listed in the maximum column, except where the contrary meaning is obvious.]

Institutions.	Language.															
	English.		Latin.		Greek.		French.		German.		Spanish.		Other languages.		Nonspecified foreign languages.	
	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.
University of Nebraska	4	3	..	..	..	..	..	..	..	..	..	..	..	..	4	2
University of Nevada	4	2	4	1	2	1	2	1	2	1	2	1	..	..	..	..
New Hampshire College of Agriculture and Mechanic Arts	..	3	3	2	..	..	2	1	2	1	..	..	..	..	..	..
Rutgers College (N. J.)	..	3	4	2	3	2	3	2	3	2	..	..	..	..	..	..
New Mexico College of Agriculture and Mechanic Arts	(1)	..	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..
Cornell University (N. Y.)	3	1½	4	1	3	1	3	1	3	1	3	1	3	1	..	..
North Carolina College of Agriculture and Engineering	..	3	4	1	..	..	1	½	1	½	1	½	..	..	..	..
North Dakota Agricultural College	..	3	..	..	..	..	..	..	..	..	..	..	..	..	(1)	1
Ohio State University	4	1	4	1	3	1	4	1	4	1	4	1	..	..	..	..
Oklahoma Agricultural and Mechanical College	..	3	..	..	..	..	..	..	..	..	..	..	..	..	(1)	1
Oregon State Agricultural College	..	3	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..
Pennsylvania State College	..	3	4	1	3	1	4	2	4	2	3	2	..	..	..	..
University of Porto Rico	4	3	..	..	..	..	..	..	..	..	3	..	..	..	(1)	..
Rhode Island State College	..	3	4	1	..	..	4	2	4	2	..	..	..	..	..	..
Clemson Agricultural College (S. C.)	..	3	3	1	..	..	3	1	3	1	..	..	..	..	..	..
South Dakota State College of Agriculture and Mechanic Arts	..	3	4	2	..	..	4	2	4	2	..	..	..	..	..	..
University of Tennessee	..	3	4	..	3	..	3	..	3	..	3	..	..	..	..	..
Agricultural and Mechanical College of Texas	4	3	4	1	..	..	2	1	2	1	2	1	..	..	..	..
Agricultural College of Utah	(1)	..	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..
University of Vermont and State Agricultural College	..	3	4	2	3	2	4	1	4	1	2	1	..	..	..	..
Virginia Agricultural and Mchanical College and Polytechnic Institute	4	3	5	1	3	1	4	1	4	1	4	1	..	..	..	..
State College of Washington	4	3	4	2	3	2	4	2	4	2	4	2	4	2	..	..
West Virginia University	4	3	4	1	2	1	3	1	3	1	..	..	..	..	..	..
University of Wisconsin	4	2	4	1	2	1	4	1	4	1	2	1	2	2	..	..
University of Wyoming	4	3	4	2	3	2	3	2	3	2	..	..	..	..	..	..

Institutions.	Mathematics.											
	Algebra.		Plane geometry.		Solid geometry.		Trigonometry.		Advanced algebra.		Nonspecified mathematics.	
	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.
University of Nebraska	..	1	..	1	..	..	..	..	..	..	4	..
University of Nevada	1	..	1	..	½	..	½	..	1	..	..	..
New Hampshire College of Agriculture and Mechanic Arts	1	..	1	..	½	..	½	..	½	..	..	..
Rutgers College (N. J.)	1	1	1	..	½	..	½	..	1	1	..	..
New Mexico College of Agriculture and Mechanic Arts	..	..	..	..	..	..	..	..	..	..	(1)	..
Cornell University (N. Y.)	1½	1	1	1	½	½	1	½	½	½	..	..
North Carolina College of Agriculture and Engineering	1½	1½	1	1	..	..	..	..	..	..	..	..
North Dakota Agricultural College	..	..	..	..	..	..	..	..	..	..	(1)	½
Ohio State University	1	1	1	1	½	½	½	½	½	½	..	..
Oklahoma Agricultural and Mechanical College	1	1	1	1	½	½	..	..	..	..	..	..
Oregon State Agricultural College	1½	1	1	1	½	½	..	..	..	..	..	..
Pennsylvania State College	1	1	1	1	½	½	½	½	½	½	..	..
University of Porto Rico	..	..	..	..	..	..	..	..	..	..	(1)	..
Rhode Island State College	1½	..	1	..	½	..	..	..	..	..	..	..
Clemson Agricultural College (S. C.)	1	..	1	..	..	..	..	..	1	..	..	..
South Dakota State College of Agriculture and Mechanic Arts	1	2	1	1	½	½	..	..	..	..	..	..
University of Tennessee	1½	..	1	..	½	..	½	..	½	..	..	..
Agricultural and Mechanical College of Texas	1½	1½	1	1	½	..	½	..	..	..	..	..
Agricultural College of Utah	..	..	..	..	..	..	..	..	..	..	(1)	..
University of Vermont and State Agricultural College	1½	..	1	..	½	..	½	..	½	..	..	..
Virginia Agricultural and Mchanical College and Polytechnic Institute	1½	..	1	..	½	..	½	..	..	..	..	..
State College of Washington	1	..	1	..	½	..	½	..	½	..	..	..
West Virginia University	1½	1	1	..	½	..	½	..	½	..	..	..
University of Wisconsin	1½	1	1	..	½	..	½	..	..	..	..	..
University of Wyoming	1	..	1	..	½	..	½	..	½	..	..	..

Institutions.	Natural science.																	
	Physiography and geology.		Physics.		Chemistry.		Botany.		Zoology.		Physiology.		General biology.		General science.		Nonspecified science.	
	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.
University of Nebraska	..	..	2	1	2	1	..	..	..	..	..	..	..	..	..	..	2	1
University of Nevada	1	½	1	..	1	..	1	½	1	½	1	..	..	..	1	..	..	..
New Hampshire College of Agriculture and Mechanic Arts	..	..	1	½	..	..	1	½	1	½	..	..	..	..	..	..	..	..
Rutgers College (N. J.)	..	..	1	..	1	..	1	..	1	..	..	..	1	..	..	..	..	..
New Mexico College of Agriculture and Mechanic Arts	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..
Cornell University (N. Y.)	1	½	1	1	1	1	1	½	1	½	..	..	1	½	..	..	..	..
North Carolina College of Agriculture and Engineering	1	½	1	½	1	½	1	½	1	½	1	½	..	..	½	½	..	..
North Dakota Agricultural College	½	½	1	1	1	1	..	½	..	½	..	½	..	½	..	..	..	..
Ohio State University	2	½	1	1	1	1	1	½	1	½	½	½	..	..	..	..	..	..
Oklahoma Agricultural and Mechanical College	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..
Oregon State Agricultural College	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..
Pennsylvania State College	2	1	1	1	1	1	1	1	1	1	1	1	..	..	..	..	..	..
University of Porto Rico	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..
Rhode Island State College	1½	½	..	..	1	..	1	..	1	..	½	..	..	..	..	..	..	..
Clemson Agricultural College (S. C.)	1	½	1	½	..	..	1	½	..	..	1	½	..	..	..	..	..	..
South Dakota State College of Agriculture and Mechanic Arts	1	½	1	1	..	..	1	..	1	..	½	..	1	..	..	..	..	..
University of Tennessee	1	..	1	..	1	..	1	..	1	..	1	..	1	..	1	..	..	..
Agricultural and Mechanical College of Texas	½	..	1	..	1	..	1	½	..	..	½	..	..	..	..	..	..	..
Agricultural College of Utah	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	(1)	..
University of Vermont and State Agricultural College	½	..	1	..	1	..	1	½	1	½	1	½	..	..	..	..	..	..
Virginia Agricultural and Mchanical College and Polytechnic Institute	1	½	1	..	1	..	1	½	1	½	1	½	..	..	..	..	..	..
State College of Washington	1	½	1	½	1	½	1	½	1	½	1	½	..	..	..	..	..	..
West Virginia University	..	..	1	..	1	..	1	..	1	..	..	..	½	..	..	..	..	..
University of Wisconsin	2	1	2	1	2	1	2	1	2	1	½	..	..	..	..	..	..	..
University of Wyoming	½	..	1	..	1	..	1	½	1	½	½	..	1	..	..	..	..	..

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[1] Units to be determined.

Institutions.	History and social science.																Vocational subjects.																										Normal training.	
	Greek and Roman history.		Medieval and modern history.		English history.		American history.		General history.		Economics and sociology.		Civics.		Non-specified social science.		Agriculture.		Drawing, art and designing.		Drawing, mechanical.		Manual training or shop work.		Domestic science.[1]		Domestic art.		Commercial law.		Commercial geography.		Bookkeeping and business arithmetic.		Stenography and typewriting.		Music.		Non-specified vocational subjects.		Pedagogy, psychology, etc.	
	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.
Alabama Polytechnic Institute	1	...	1	...	1	...	1	...	...	...	...	...	1	½	...	...	2	½	1	½	2	½	2	1	2	½	...	...	...	...	½	...	1	½	1	½	3	½	...	...	1	½
University of Arizona	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	1	...	...	...	...	...	...	...	1	...	2	...	1	...	...	...	...	...
University of Arkansas	1	½	1	½	1	½	1	½	...	...	½	...	½	...	...	...	4	½	2	½	2	½	2	½	2	½	2	½	½	...	½	...	2½	½	1	...	3	1	...	...	1	½
University of California	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	3	½	2	½	1	...	3	½	3	½	...	...	...	...	½	...	...	...	2	1	3	1	...	...	...	...
Colorado Agricultural College	1	...	1	...	1	...	1	...	...	...	1	...	...	...	...	...	2	...	1	...	...	...	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Connecticut Agricultural College[2]	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Delaware College	1	...	1	...	1	...	1	...	...	...	...	...	½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(3)	...	...	...
University of Florida	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(4)	...	...	...
Georgia State College of Agriculture	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	3	1	1	½	1½	1	5½	½	...	...	...	...	½	...	...	...	2	½	...	...	...	...	...	...	...	...
College of Agriculture and Mechanic Arts of the Territory of Hawaii	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(3)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(3)	...	...	...
University of Idaho	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(4)	...	...	...
University of Illinois	1	...	1	...	1	½	1	½	...	...	1	½	1	½	...	...	2	1	1	½	1	½	2	1	2	1	...	...	½	...	1	½	1	...	...	...	2	1	...	...	...	...
Purdue University (Ind.)	1	...	1	...	1	...	1	...	1	...	...	...	...	...	...	...	1	½	1	½	1	½	2	½	1	½	...	...	...	...	...	...	1	½	...	...	...	...	...	...	...	...
Iowa State College of Agriculture and Mechanic Arts	1	½	1	½	1	½	1	½	...	...	½	...	1	½	...	...	2	½	2	½	2	½	4	½	2	½	...	...	½	...	½	...	1½	½	1	½	...	...	...	...	1	½
Kansas State Agricultural College	1	...	1	...	1	...	1	...	...	...	1½	½	½	...	...	...	4	½	1	½	...	...	3	½	2	½	2	½	½	...	½	...	1	½	1	½	1	...	...	...	2½	½

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[1] Domestic art sometimes is included.

[2] The unit credit system is not employed.

[3] Units to be determined.

[4] Additional units may be offered for subjects commonly taught in high schools.

TABLE 6.—*Maximum and minimum entrance credit allowed for the various high-school subjects*—Continued.

Institutions.	History and social science.																Vocational subjects.																								Normal training.	
	Greek and Roman history.		Medieval and modern history.		English history.		American history.		General history.		Economics and sociology.		Civics.		Non-specified social science.		Agriculture.		Drawing, art and designing.		Drawing, mechanical.		Manual training or shop work.		Domestic science.		Domestic art.		Commercial law.		Commercial geography.		Bookkeeping and business arithmetic.		Stenography and typewriting.		Music.		Non-specified vocational subjects.		Pedagogy, psychology, etc.	
	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.
University of Kentucky	1	...	1	...	1	...	1	...	...	...	½	...	½	...	...	...	1	...	1	½	...	...	1	½	1½	...	...	...	...	1	½	1	½	...	...	...	...	...	...	½	...	...
Louisiana State University and Agricultural and Mechanical College	1	...	1	...	1	...	1	...	...	...	...	...	1	½	...	...	...	...	1	½	1	½	3	1	...	...	...	...	...	...	1	½	1	½	1	½	...	...	...	...	...	...
University of Maine	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	½	3	½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(¹)	...	...	...
Maryland State College of Agriculture	1	...	1	...	1	...	1	...	1	...	...	...	...	...	...	...	3	½	1	½	1	½	1	½	...	...	...	...	...	...	...	...	½	...	...	...	...	...	...	...	...	...
Massachusetts Agricultural College	1	1	1	1	1	1	1	1	1	1	...	...	...	...	...	...	1	½	½	½	...	...	1	½	...	...	...	...	...	...	½	½	...	...	...	...	...	...	...	...	...	...
Michigan Agricultural College	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	3	1	1	...	...	...	2	1	2	1	2	1	...	...	...	...	1	½	1	½	...	...	...	...	...	...
University of Minnesota	1	...	1	...	1½	½	1	½	...	...	½	...	1	½	...	...	4	1	3	1	2	...	2	...	2	...	2	...	½	...	1	½	2½	½	2	...	...	...	...	...	3	1
Mississippi Agricultural and Mechanical College	1	...	(²)	...	(²)	...	(²)	...	...	...	...	...	...	...	...	...	(²)	...	...	...	...	...	...	...	...	...	...	...	½	½	...	...	1½	½	1	...	...	...	...	...	...	...
University of Missouri	1	...	1	...	1	½	1	½	2	...	½	½	½	½	...	...	2	1	2	1	...	...	2	1	1	...	1	...	...	...	½	...	1	½	...	...	1½	1	...	...	2	2
Montana State College of Agriculture and Mechanic Arts	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(²)	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(²)	...	...	...
University of Nebraska	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...
University of Nevada	1	...	1	...	1	...	1	...	...	...	1	...	...	...	...	...	3	½	3	½	...	...	6	½	3	½	...	...	...	...	...	...	3	½	3	1	3	½	...	...	...	...
New Hampshire College of Agriculture and Mechanic Arts	1	...	1	...	1	...	1	...	...	...	½	...	...	...	...	...	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rutgers College (N. J.)	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
New Mexico College of Agriculture and Mechanic Arts	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(²)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(²)	...	...	...

Cornell University (N. Y.)	1	½	1	½	1	½	1	½	...	...	...	...	...	...	...	...	1	½	1	½	...	...	1	1	(²)	...	(²)	...	...	...	...	...	1	½	...	...	...	...	(¹)	...	...	...
North Carolina College of Agriculture and Engineering	1	1	1	1	1	1	1	1	...	...	...	...	½	½	...	...		½	½	½	½	½	1	½	...	...	...	...	...	...	...	...	½	½	...	...	...	...	...	...	...	...
North Dakota Agricultural College	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(²)	...	...	...
Ohio State University	1	1	1	1	1	½	1	1	1	1	...	...	...	...	...	...	3	½	(²)	...	...	...	(²)	...	(²)	...	(²)	...	(²)	...	(²)	...	(²)	...	(²)	...	...	...	...	...	...	...
Oklahoma Agricultural and Mechanical College	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(²)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(²)	...	...	...
Oregon State Agricultural College	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(²)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(²)	...	...	...
Pennsylvania State College	1	1	1	1	1	1	1	1	1	1	...	...	...	...	...	...		1	½	½	1	½	1	½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
University of Porto Rico	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(²)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(²)	...	...	...
Rhode Island State College	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	2	1	1	1	1	...	2	1	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Clemson Agricultural College (S. C.)	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	2	1	1	½	1	½	1	½	...	...	...	...	...	...	1	½	...	...	...	...	...	...	...	...	...	...
South Dakota State College of Agriculture and Mechanic Arts	1	...	1	...	1	...	1	...	...	...	...	...	½	½	...	...		...	½	...	...	...	1	...	½	...	½	...	...	...	½	...	½	...	...	...	...	...	...	...	...	...
University of Tennessee	1	...	1	...	1	...	1	...	...	...	...	...	½	...	...	...	2	1	2	1	...	...	2	1	2	1	...	...	½	...	½	...	1	...	1	...	3	1	...	...	...	...
Agricultural and Mechanical College of Texas	1	...	1	...	1	...	1	½	...	...	...	...	½	...	...	...		1	1	½	...	...	1	½	...	...	...	...	...	...	...	...	½	...	1	½	...	...	...	...	...	...
Agricultural College of Utah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(²)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(²)	...	...	...
University of Vermont and State Agricultural College	1	...	1	...	1	...	1	...	...	...	...	...	1	½	...	...	2	½	½	...	1	½	1	½	1	½	...	...	...	...	...	...	1	½	½	...	...	...	...	...	...	...
Virginia Agricultural and Mechanical College and Polytechnic Institute	1	...	1	...	1	...	1	½	...	...	...	...	½	...	...	...	2	½	2	1	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(¹)	...	...	...
State College of Washington	1	...	1	...	1	...	1	...	...	...	½	...	...	...	...	...	2	½	2	½	...	...	2	½	1	½	1	½	...	...	...	...	2	...	2	1	2	...	...	...	...	...
West Virginia University	1	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	3	1	2	1	2	1	2	1	3	1	...	...	...	...	...	...	2	1	1	...	...	...	...	...	...	...
University of Wisconsin	1	...	1	...	1	...	1	...	1	...	½	...	1	½	...	...	4	1	2	1	...	...	4	1	2	1	2	1	½	...	½	...	2½	½	2	1	...	...	(¹)	...	...	...
University of Wyoming	1	...	1	...	1	½	1	½	...	...	1	½	½	...	...	...		...	...	...	...	...	1	...	2	...	...	...	...	...	...	...	2	...	3	1	...	...	(¹)	...	1	½

[1] Additional unit s may be offered for subjects commonly taught in high schools.

[2] Units to be determined.

Table 7.—*Frequency of occurrence of the various high-school subjects accepted for admission.*

Subjects.	Institutions accepting.	Subjects.	Institutions accepting.
English	49	Greek and Roman history	40
Latin	40	Medieval and modern history	40
Greek	40	English history	40
French	40	American history	40
German	40	General history	7
Spanish	38	Economics and sociology	13
Other languages	5	Civics	18
Algebra	42	Agriculture	35
Plane geometry	42	Drawing, art, and designing	33
Solid geometry	38	Drawing, mechanical	18
Trigonometry	31	Manual training or shopwork	34
Advanced algebra	27	Domestic science[1]	24
Physiography and geology	37	Domestic art	10
Physics	42	Commercial law	10
Chemistry	39	Commercial geography	16
Botany	41	Bookkeeping and business arithmetic	27
Zoology	38	Stenography and typewriting	19
Physiology	31	Music	10
General biology	13	Pedagogy, psychology, etc	9
General science	8		

[1] Domestic art sometimes is included.

TABLE 8.—*The practice of the institutions in awarding collegiate credit.*

Institutions.	Terms in college session.	Unit of collegiate credit: S. H.=Semester-hour. T. H.=Term-hour. Y. H.=Year-hour.	Duration of a one-credit recitation period.	Duration of a one-credit laboratory period.	Credit hours per week required.[1]	
					Minimum.	Maximum.
			Minutes.	*Hours.*		
Alabama Polytechnic Institute	3	T. H.	60	1	(²)	(³)
University of Arizona	2	S. H.	50	3	....	....
University of Arkansas	2	S. H.	50	2-3	....	....
University of California	2	S. H.	50	2-3	....	19
Colorado Agricultural College	2	S. H.	50	2	(²)	....
Connecticut Agricultural College	2	S. H.	50	2	(²)	....
Delaware College	2	S. H.	50	2	....	20
University of Florida	2	S. H.	50	2	16	23
Georgia State College of Agriculture	3	Y. H.	50	2	....	....
College of Agriculture and Mechanic Arts of the Territory of Hawaii	2	S. H.	50	2-3	(²)	....
University of Idaho	2	S. H.	50	3	12	19
University of Illinois	2	S. H.	50	2-3	15	18
Purdue University (Ind.)	2	S. H.	50	2½	(²)	....
Iowa State College of Agriculture and Mechanic Arts	2	S. H.	50	3	....	....
Kansas State Agricultural College	2	S. H.	50	3	(²)	....
University of Kentucky	2	S. H.	50	2	12	18
Louisiana State University and Agricultural and Mechanical College	2	S. H.	50	3	(²)	....
University of Maine	2	S. H.	50	2-3	17	22
Maryland State College of Agriculture	3	T. H.	50	2	(²)	....
Massachusetts Agricultural College	3	T. H.	50	2	16	21
Michigan Agricultural College	3	T. H.	50	2-3	18	23
University of Minnesota	2	S. H.	50	2-3	15	18
Mississippi Agricultural and Mechanical College	3	T. H.	50	2	20	....
University of Missouri	2	S. H.	50	2	12	18
Montana State College of Agriculture and Mechanic Arts	2	S. H.	60	2-2½	12	19
University of Nebraska	2	S. H.	50	3	12	18
University of Nevada	2	S. H.	50	2½	10	18
New Hampshire College of Agriculture	2	S. H.	50	2½	(²)	(⁴)
Rutgers College (N. J.)	2	S. H.	55	2-3	(²)	....
New Mexico College of Agriculture and Mechanic Arts	2	S. H.	50	2	18	....
Cornell University (N. Y.)	2	S. H.	50	2½-3	12	18
North Carolina College of Agriculture and Engineering	2	S. H.	50	2	(²)	....
North Dakota Agricultural College	3	T. H.	50	2	15	21
Ohio State University	2	S. H.	55	3	....	....
Oklahoma Agricultural and Mechanical College	2	S. H.	50	3	12	20
Oregon State Agricultural College	2	S. H.	50	2-3	13	21
Pennsylvania State College	2	S. H.	50	2-2½	18	21
University of Porto Rico	2	S. H.	50	2	....	....
Rhode Island State College	2	S. H.	50	2	....	....
Clemson Agricultural College (S. C.)	3	T. H.	50	1	....	....
South Dakota State College of Agriculture and Mechanic Arts	2	S. H.	50	2-2½	14	20
University of Tennessee	2	S. H.	50	2	12	18
Agricultural and Mechanical College of Texas	2	S. H.	50	2	16	24
Agricultural College of Utah	3	S. H.	50	2½-3	15	15
University of Vermont and State Agricultural College	2	S. H.	50	2	....	....
Virginia Agricultural and Mechanical College and Polytechnic Institute	3	T. H.	50	1	(²)	....
State College of Washington	2	S. H.	50	2	15	20
West Virginia University	2	S. H.	50	2-3	15	20
University of Wisconsin	2	S. H.	50	2	16	....
University of Wyoming	2	S. H.	50	3	14	18

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[1] In most cases the minimum and maximum requirements per week include the work in military and physical drill, but this point is not always stated definitely.

[2] Minimum requirements are according to term schedule.

[3] Not more than five actual hours per week in excess of the scheduled number may be carried without special permission.

[4] Not more than two hours in excess of the term schedule.

TABLE 9.—*Requirements for graduation*—PART I: *Languages, mathematics, political and social science, education.*

[The use of italics indicates that a limited number of courses may be substituted for the one listed.]

Institutions.	Languages.																Mathematics				Political and social science.																All nontechnical subjects.			
	Foreign language.				English composition and rhetoric.				English literature.[1]				Argumentation and public speaking.								History and civil government.				Economics and sociology (general).				Rural economics and rural sociology.				Psychology and education.							
	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.
Alabama Polytechnic Institute				7⅓	4⅔				5⅓		*6*			6			10				4	2⅔															24	8⅔	6	7⅓
University of Arizona	4	4			3						*4*	*4*	3				5											6									15	4	4	10
University of Arkansas					6		6											4														6					6	4	6	6
University of California		6			6												6										3				3						12	6	6	
Colorado Agricultural College					6				4					5			5											2				2					15	5		4
Connecticut Agricultural College					[2]6					[2]4													6				6										6	4	12	
Delaware College	6	6			6					4							4				1							6									17	10		6
University of Florida					6				1			[2]3					4											*6*				2					11			11
Georgia State College of Agriculture					6					6							6					3				3											12	12		
College of Agriculture and Mechanic Arts of the Territory of Hawaii	6	6			6					6							6											3									18	12		3
University of Idaho					2	4			4																												6	4		
University of Illinois					6					4														*2*			*3*		2		*2*	*2*					8	4	5	4
Purdue University (Ind.)			6	6	6					6							6						6					6									12	6	12	12
Iowa State College of Agriculture and Mechanic Arts						6						[3]2				2	3														3	2					3	6	3	6
Kansas State Agricultural College					6				[2]5		[3]1																										11		1	
University of Kentucky					6					4																					3						6	4	3	
Louisiana State University and Agricultural and Mechanical College					[2]6												6																				12			
University of Maine	5				4		2				2		2					5																			11	5	4	
Maryland State College of Agriculture	6	6	3⅓	2	10	4								2	2		3⅓				*6*		4				2	8							2⅔		25⅓	12	14	10
Massachusetts Agricultural College	6	6							6	4	*3⅓*		2				10						*2*			5⅓	3⅓					*3⅓*					24	15⅓	8⅔	3⅓
Michigan Agricultural College					6									4			4⅔								2				1⅓								14	4		
University of Minnesota					6									6			3				3	3				*3*				3							12	15		
Mississippi Agricultural and Mechanical College					6	4				2							6⅔	6			6			2			2⅔										18⅔	12	2⅔	2
University of Missouri					6																						5										6		5	

Montana State College of Agriculture and Mechanic Arts					6	4											3										4										9	4	4	
University of Nebraska					4	4																		6			3				2						4	4	5	6
University of Nevada					6																										4½					3	6		4½	3
New Hampshire College of Agriculture and Mechanic Arts					6												4				1							3				3					11			6
Rutgers College (N. J.)	8	6			2				4	4							10						6					{4 4}									24	10	6	8
New Mexico College of Agriculture and Mechanic Arts					6																							5									6			5
Cornell University (N. Y.)									²8																6				2½			3					10½	6		3
North Carolina College of Agriculture and Engineering			4		3	3			3		6			3			10										4					6					16	6	14	6
North Dakota Agricultural College					2⅔				⅔		2⅔		2⅔					1⅓									2⅔				2⅔						6	1⅓	8	
Ohio State University					4												3										6										7		6	
Oklahoma Agricultural and Mechanical College					6					³2			2														3									2	8	2	3	2
Oregon State Agricultural College									6¾															6							3						6¾		3	6
Pennsylvania State College	6	6			3	6							3				5						6					6									17	12	6	6
University of Porto Rico					6																						6						6				12		6	
Rhode Island State College	6	6			6					³1	4	2⅔		3	2	2	5						4	2⅔				2⅔					½				17½	10	10	10
Clemson Agricultural College (S. C.)					10	4				2	4	4					10	3⅓			6		4					4								⅔	26	9⅓	8	8⅔
South Dakota State College of Agriculture and Mechanic Arts	8	8			6						6			2														3				3			3		14	10	9	6
University of Tennessee	6	6			3				3		6						6											3				3					18	6	6	6
Agricultural and Mechanical College of Texas					6					6					2	2												3				7					6	6	2	12
Agricultural College of Utah	6	6			4																							6			6						10	6	6	6
University of Vermont and State Agricultural College	6				4					4	3				3		8											6				3					18	4	6	9
Virginia Agricultural and Mechanical College and Polytechnic Institute	6	6	6		6	6					6						12											4									24	12	12	4
State College of Washington			10	10	3	4			3½																			5			5						6½	4	15	15
West Virginia University					6				4														3				3	4									10		6	4
University of Wisconsin	8				6													5													5						14	5	5	
University of Wyoming					6												10																				16			
Frequency of occurrence	15	13	5	4	46	11	2	0	14	15	13	5	6	8	4	3	28	6	0	0	7	3	9	5	1	4	15	21	3	1	11	13	2	0	2	3	50	38	57	33
Median requirement[4]	12				6				6				3				5				6				4				3				2⅔				23			

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[1] Includes library practice and journalism.

[2] Includes other phases of English.

[3] Journalism.

[4] Based only upon the institutions listing requirements in the subject.

TABLE 9.—*Requirements for graduation*—PART II: *Agronomy, horticulture.*

[The use of italics indicates that a limited number of courses may be substituted for the one listed.]

Institutions.	Agronomy and soils.																				Horticulture.																			
	Field and forage crops.[1]				Soils (general).				Soil fertility and management (including fertilizers).				Farm management (including farm accounts).				General agronomy (including thesis and seminar).				Plant propagation.				Pomology.				Olericulture.				Landscape or ornamental gardening.				General horticulture.			
	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.
Alabama Polytechnic Institute	...	4	...	2⅔	...	...	...	10	...	...	...	...	...	1	...	2	...	...	...	4	...	2⅔	...	...	...	...	⅔	...	...	...	4	...	...	...	1⅓	...	...	...	...	...
University of Arizona	3	...	...	...	...	4½	...	...	...	4½	...	...	...	...	...	3½	...	...	...	3	...	...	4	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...
University of Arkansas	...	...	6	...	...	6	...	...	...	...	...	6	...	...	...	6	...	...	...	4	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
University of California	...	...	*6½*	...	...	4½	...	...	...	...	...	...	...	...	...	*3*	...	...	...	*1* 5	...	4½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Colorado Agricultural College	...	3	3	3	...	3	2	...	...	...	...	...	...	...	...	3	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Connecticut Agricultural College	3	...	*6*	*4*	...	3	...	...	...	...	...	*4*	...	3	...	*3*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Delaware College	...	...	6	3	...	...	...	3	...	...	6	...	...	...	...	3	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...
University of Florida	...	...	6	...	...	...	6	...	...	3	...	3	...	...	...	6	4	...	...	...	4	...	...	...	...	...	...	...	...	4	...	...	...	...	...	2	...	...	...	...
Georgia State College of Agriculture	4	...	6	6	...	3	4	6	...	3	...	...	...	...	...	*6*	...	...	...	...	2	...	...	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...
College of Agriculture and Mechanic Arts of the Territory of Hawaii	...	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
University of Idaho	5	...	4	...	...	5	2	...	...	...	3	...	...	...	3	...	...	...	...	6	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...
University of Illinois	5	...	*8*	...	...	...	7	...	...	...	7	*3*	...	...	...	*3*	...	...	...	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...
Purdue University (Ind.)	...	3½	5	3½	...	3½	5	3½	...	3½	3½	...	...	...	...	6	...	...	...	5	...	...	...	...	...	3½	...	...	...	3½	...	...	...	...	...	...	...	...	...	...
Iowa State College of Agriculture and Mechanic Arts	6	6	...	6	...	4	...	...	...	...	4	2	...	...	3	...	...	...	1½	4½	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	3	...	...	...
Kansas State Agricultural College	...	7	...	*5*	...	...	4½	...	...	...	3½	...	...	...	...	*6*	...	...	...	...	3	...	...	...	...	2½	...	...	...	...	...	...	...	...	...	...	...	...	...	...
University of Kentucky	...	*3* 4	*4* 2	*2*	...	...	4	*4*	...	...	5	*2*	...	...	3	*3*	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3	...	...
Louisiana State University and Agricultural and Mechanical College	...	6	...	*8*	...	...	5	*6*	...	...	*4*	...	...	...	...	*4*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...
University of Maine	2	3	6	2	...	3½	...	...	...	...	...	2	...	...	...	5½	...	...	...	...	...	...	...	...	...	3½	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maryland State College of Agriculture	2⅔	2	2	...	...	5⅓	1⅓	2⅔	...	2⅔	...	...	...	...	...	5⅓	...	...	...	1⅓	...	...	...	...	...	4	...	...	...	4⅔	...	...	...	2⅔	...	...	...	...	...	...
Massachusetts Agricultural College	⅔	...	6⅔	...	...	3⅓	...	3⅓	...	...	...	3⅓	...	...	...	3⅓	...	...	...	...	...	...	...	...	⅔	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Michigan Agricultural College	2	1⅓	...	6⅔	...	1⅓	...	6⅔	...	2	...	3⅓	...	...	2	...	...	...	...	...	...	1⅓	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
University of Minnesota	3	...	3½	3	...	...	3	...	...	...	3	...	...	...	3	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...

Mississippi Agricultural and Mechanical College	3⅛		3⅓	2⅔	3⅛						4	2⅔		1⅓		2⅔				5		2⅔																	2⅔	
University of Missouri		5		14			5													3																	3			
Montana State College of Agriculture and Mechanic Arts		8⅔		2½			5½	2			3					6				4	3½																	4		
University of Nebraska		4	6			4					4	6			3											2														
University of Nevada		4¼	4½													5½																							3¼	
New Hampshire College of Agriculture and Mechanic Arts			3¼				3¼					3				3¼							3½			3¼		4¼		3¼	3½				[2]5½				3¼	1¼
Rutgers College (N. J.)		3½				3½					2	14								5			3½				4½													
New Mexico College of Agriculture and Mechanic Arts		6	2½				3½				3½					6	2			8½	2½						3			3				2						
Cornell University (N. Y.)			7½	3				3½			3¼	4½			2¼											3¼					2¼									
North Carolina College of Agriculture and Engineering			6	12			6					3				3						3					6				3									
North Dakota Agricultural College	2	3⅓				3⅓				3⅓	5⅓					3⅓				4	2⅔																	2⅔		
Ohio State University		4	4	7		6										4			2	2																				4
Oklahoma Agricultural and Mechanical College		7	3	4			4				6					6				6						3			3											
Oregon State Agricultural College	3½		5	8		8	5					3		2		3										3				1½				1½						
Pennsylvania State College			6	3		4	5				3					6				2		3										3								
University of Porto Rico		6	6	12		4									3		6			3																	6	6	8	
Rhode Island State College		2	4				5½								2						2				2		2		2						3					
Clemson Agricultural College (S. C.)			2	6			4						1⅓			4⅔											2	2			2	2								
South Dakota State College of Agriculture and Mechanic Arts	5		5				6				6																											2		
University of Tennessee			6	6						3		6														3														
Agricultural and Mechanical College of Texas	3		5				3 5	3				3				6 5														3								4		
Agricultural College of Utah	6½					6½	2¼													2½																				
University of Vermont and State Agricultural College			3			6									3	3											3	3		3										
Virginia Agricultural and Mechanical College and Polytechnic Institute			5				4							2		2										2½												2		
State College of Washington	5		3			4				3						3										2														
West Virginia University		4½	7							5	2		1		3	3	1			2						3½			3½											
University of Wisconsin	2½			8		5						5								1						3														
University of Wyoming	8						4				4					2															2									
Frequency of occurence	20	22	36	27	1	24	26	12	0	10	21	19	2	5	11	36	4	0	2	23	9	7	3	0	3	15	8	3	4	8	6	4	0	3	3	1	5	10	4	2
Median requirement[3]	9¼				5				4½				5½				4				3				3				3				2				3½			

[1] Includes judging and testing grain.

[2] Partly floriculture.

[3] Based only upon the institutions listing requirements in the subject.

TABLE 9.—*Requirements for graduation*—PART III: *Agricultural engineering, genetics.*

[The use of italics indicates that a limited number of courses may be substituted for the one listed.]

Institutions.	Agricultural engineering.																												Genetics.											
	Farm mechanics (shop work).				Farm machinery (including motors and engines).				Rural architecture.				Irrigation and drainage.				Surveying, platting, etc.				Drawing.				General agricultural engineering.				Animal breeding.				Plant breeding and crop improvement.				General genetics.			
	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.
Alabama Polytechnic Institute	6	...	...	...	...	...	...	⅔	...	...	...	...	...	...	2	...	3⅓	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
University of Arizona	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...
University of Arkansas	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...
University of California	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4½	...	...
Colorado Agricultural College	4	...	...	...	...	...	6	...	3	...	...	...	...	...	3	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	1
Connecticut Agricultural College	3	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	*3*	...	...	...	...	...	...	...	...	...	...	*3*	...
Delaware College	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	3
University of Florida	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...
Georgia State College of Agriculture	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	*6*
College of Agriculture and Mechanic Arts of the Territory of Hawaii	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3¼	...	...	...	...
University of Idaho	1½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...
University of Illinois	...	3½	...	...	...	...	*4*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	*3*	...	2	...	...
Purdue University (Ind.)	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...
Iowa State College of Agriculture and Mechanic Arts	3	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5½	...	...	...	...	...
Kansas State Agricultural College	...	...	...	...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...
University of Kentucky	...	...	*3*	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	*4*	...	...	...	...	...	...	...	...	...	...	...	...
Louisiana State University and Agricultural and Mechanical College	...	...	...	...	8	...	*5*	...	...	...	...	...	...	...	*5*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
University of Maine	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	7	...	...	...	...	...	...	2	...	...	...	...	...
Maryland State College of Agriculture	...	...	1⅓	...	...	...	...	2⅔	...	...	...	2	...	...	...	1⅓	...	...	2⅔	...	1⅓	...	1⅓	...	...	...	...	...	...	...	...	...	...	...	...	8	...	...	...	...
Massachusetts Agricultural College	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Michigan Agricultural College	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	1⅓	...	...	...	...	3⅓	...	...	...	...
University of Minnesota	...	...	...	...	...	...	...	*3*	...	...	...	3½	...	...	...	...	...	...	...	...	...	3	...	...	...	...	3	...	...	...	...	...	...	...	...	3	...	...	...	3
Mississippi Agricultural and Mechanical College	1⅓	...	...	...	1⅓	...	3⅓	...	...	...	...	...	...	...	...	3⅔	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2⅔	...	...	...	...

University of Missouri																																			3					
Montana State College of Agriculture and Mechanic Arts				3¼																3½																				4
University of Nebraska	6							4																																
University of Nevada	2½						3				4½					5½			4½																	3				
New Hampshire College of Agriculture and Mechanic Arts			3½														2				2½					3¼										2				
Rutgers College (N. J.)																					5																			
New Mexico College of Agriculture and Mechanic Arts					3½	2½									3			4																		3				
Cornell University (N. Y.)																											6⅔									4¼				3
North Carolina College of Agriculture and Engineering	2					2										3					2											3				3				
North Dakota Agricultural College					2													1½																					3½	3½
Ohio State University	5																				2½						4								4					
Oklahoma Agricultural and Mechanical College	3						4				3																								2	3			2	
Oregon State Agricultural College															3½		2																		3½	2				
Pennsylvania State College							3½					3																							2			2		
University of Porto Rico	6						6																							3										
Rhode Island State College							3											3			1											3				3				
Clemson Agricultural College (S. C.)	4					2		2								2		3			4															1½			⅔	
South Dakota State College of Agriculture and Mechanic Arts																																								3
University of Tennessee																																3				3		3		
Agricultural and Mechanical College of Texas							3								3				5																	4				
Agricultural College of Utah																																								
University of Vermont and State Agricultural College				6			3										1				1										3									
Virginia Agricultural and Mechanical College and Polytechnic Institute	5					2				1				2				4			5										4									4
State College of Washington						4																													2					
West Virginia University								3																												3				
University of Wisconsin																3									2½											3				
University of Wyoming						6								3				3																		2				
Frequency of occurrence	16	2	3	2	5	8	12	8	1	1	2	3	0	2	7	6	5	11	4	1	15	2	1	0	2	1	3	4	1	1	3	3	0	0	10	23	0	4	5	9
Median requirement[1]	3½				3				3				3				3				3				3⅝				3				3				3			

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[1] Based only upon the institutions listing requirements in the subject.

TABLE 9.—*Requirements for graduation*—PART IV: *Animal husbandry, forestry, general agriculture, all technical subjects.*

[The use of italics indicates that a limited number of courses may be substituted for the one listed.]

Institutions.	Animal husbandry.																								Forestry.				General agriculture (including farm practice.)				Total technical subjects.			
	Breeds and types of livestock (including stock judging.)				Feeding and management of livestock.				Dairy husbandry and dairy industries.				Poultry husbandry.				Veterinary science and practice.				General animal husbandry.															
	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.
Alabama Polytechnic Institute	...	2	2⅔	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	*8*	...	...	...	...	...	...	...	...	2⅔	...	...	...	...	14⅓	9⅔	20⅔	22
University of Arizona	...	3½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	3	6	12½	10	12½
University of Arkansas	3	3	...	...	...	...	3	6	...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15	12	15	22
University of California	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	[1]6	[2]11	...	16½	12½	20
Colorado Agricultural College	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14	11	14	10
Connecticut Agricultural College	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	9	9	14
Delaware College	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	4	...	...	...	4	8	12	20
University of Florida	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	17	7	12	14
Georgia State College of Agriculture	2	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18	12	12	24
College of Agriculture and Mechanic Arts of the Territory of Hawaii	...	...	...	3½	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	...	5	5	10	18½
University of Idaho	3	3	...	...	...	...	3	...	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13½	14	17½	10
University of Illinois	3	...	...	...	...	3	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16	8½	26	15
Purdue University (Ind.)	6	...	...	...	...	4½	3	...	...	3½	...	...	3½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12½	29½	19½	18
Iowa State College of Agriculture and Mechanic Arts	5	8	...	...	...	...	...	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	1	...	...	...	23	24	14	17½
Kansas State Agricultural College	5½	...	...	...	...	...	3	...	...	3½	...	*3½*	...	*2½*	...	...	...	6	...	...	...	...	...	2	...	...	...	...	...	...	...	3½	8½	21½	15	27
University of Kentucky	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	13	27	15
Louisiana State University and Agricultural and Mechanical College	8	...	...	...	...	...	6	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16	12	30	18
University of Maine	3	1	...	...	...	2	2	...	...	...	4	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	18	14	16½
Maryland State College of Agriculture	2	...	2⅔	...	3⅓	...	2⅔	...	...	...	...	2⅔	...	...	...	2	...	...	...	3⅓	...	...	...	...	...	...	...	2⅔	...	...	...	...	9⅓	21⅓	14	34
Massachusetts Agricultural College	⅔	...	...	2	...	...	...	...	...	...	...	...	⅔	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2⅔	3⅓	6⅔	12
Michigan Agricultural College	2	...	2	...	...	...	3½	...	...	2	...	...	...	...	1⅓	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	10	12	10	20
University of Minnesota	3	...	...	...	...	...	6	3	3	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	12	3	24½	24½
Mississippi Agricultural and Mechanical College	...	3½	...	...	...	...	3½	...	...	2⅔	4	...	⅔	...	2⅔	...	2⅔	...	3⅓	...	...	...	...	...	...	...	...	2	3½	...	...	...	18	10	26⅔	21⅓
University of Missouri	3	...	...	...	...	...	3	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	8	11	17

Montana State College of Agriculture and Mechanic Arts	3½		4¼						3½											4													10	12¾	12¼	29
University of Nebraska	4								5																								15	10	13	10
University of Nevada	3	4½				3				3½										3									3				8½	15	19¾	17
New Hampshire College of Agriculture and Mechanic Arts		3								3¼				3												3¼							4½	22¼	25½	13¾
Rutgers College (N. J.)			3½							2½				2½																			5	12	13½	19
New Mexico College of Agriculture and Mechanic Arts	5½						3			3½									3														13½	21	21½	17½
Cornell University (N. Y.)																								5½										3¼	22	23¼
North Carolina College of Agriculture and Engineering			3				3			3					3			5															4	13	30	27
North Dakota Agricultural College	9½					2				2								9½														³2⅔	16	27½	8⅔	13⅓
Ohio State University			4								4																		1				8½	10	22	17
Oklahoma Agricultural and Mechanical College	3½	4					3		3						2																	3½	12½	14	29	22½
Oregon State Agricultural College	3				3			3		3				2																			11½	21	17	19
Pennsylvania State College	3			2					2			4																			¹6		5	9	25½	23
University of Porto Rico		3	3				3														6												24	22	29	15
Rhode Island State College	4							3			3				1				3													³3	11	5	26½	12
Clemson Agricultural College (S. C.)			3⅔					2			4⅔					⅔			5⅓										4				13⅓	5	24⅓	22⅔
South Dakota State College of Agriculture and Mechanic Arts	7								3									2															15	4	17	3
University of Tennessee		3	3			2	3			3									6										2				2	17	18	18
Agricultural and Mechanical College of Texas	4	3						4	3					2				6															10	18	24	25
Agricultural College of Utah											3½																						6½	6½	5¾	2½
University of Vermont and State Agricultural College		2	3			3			2		3	3				6			6	3						2							4	16	27	24
Virginia Agricultural and Mechanical College and Polytechnic Institute		7						6			2	6						4		1													10	26½	15	27
State College of Washington	5						3			3					3																		10	16	11	3
West Virginia University	3½					3				3½				3½																			9	23	12	11
University of Wisconsin	2½						2		2½																								10	8	2	20
University of Wyoming		6					5											3															8	21	15	4
Frequency of occurrence	32	18	11	3	2	8	19	9	12	16	10	5	3	7	7	3	1	8	8	5	1	1	1	2	2	2	0	3	8	0	3	6	48	50	50	50
Median requirement[4]	4⅔				3				3⅛				2½				5				4				2				3¼				60½			

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[1] Represents credit for summer practice.
[2] This represents credit for elective agricultural work.
[3] Methods of investigation in agriculture.
[4] Based only upon the institutions listing requirements in the subject.

TABLE 9.—*Requirements for graduation*—PART V: *Military training, physical training, biology.*

[The use of italics indicates that a limited number of courses may be substituted for the one listed.]

Institutions.	Military science and tactics.				Personal hygiene and human physiology.				Physical training (gymnasium).				Biology.																							
													General botany.[1]				Agricultural or economic botany (including plant pathology).				Bacteriology.				Zoology.				Entomology.				General biology.			
	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.
Alabama Polytechnic Institute	3	3	5	2	...	...	...	...	...	...	...	...	...	8	5⅓	...	...	...	...	...	...	...	2⅔	...	...	5⅓	...	...	...	...	...	5⅓	...	...	...	...
University of Arizona	3	3	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	4½	...	...	...	...	...	...	...	...	...	...	5	...	...
University of Arkansas	4	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3½	...	5	...	...	...	...	...	...	...	3½	...	...	6	...	...	...
University of California	3	3	...	...	2	...	...	...	2	2	...	...	8	...	...	...	...	...	*5* 4	...	6	...	...	4½	...	4	...	...	...	...	...	...	...	...	...	...
Colorado Agricultural College	2	2	2	...	3	...	...	...	...	...	...	...	5	...	5	...	2	...	...	3	...	...	...	2	...	4⅓	...	1	...	...	...	...	...	...	...	...
Connecticut Agricultural College	3	3	3	3	...	...	...	...	2	...	...	...	4	...	*3*	...	...	...	...	*3*	...	...	*4*	*3*	4	...	...	...	...	...	...	...	...	...	...	...
Delaware College	3	3	3	3	...	...	...	...	1	1	...	...	6	...	...	...	...	...	...	...	...	...	6	...	...	...	6	...	...	...	...	...	...	...	...	...
University of Florida	2	2	...	...	...	...	...	...	...	...	...	...	6	3	...	...	...	...	3	...	...	...	6	...	...	6	...	...	...	...	3	...	...	...	...	...
Georgia State College of Agriculture	4	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	...	*3*	...	...	...	...	...	...	...	*3*	...	...	...	...	...
College of Agriculture and Mechanic Arts of the Territory of Hawaii	...	...	...	...	...	...	...	...	...	...	...	...	7	3¼	...	...	...	...	...	...	...	...	...	4½	...	3¼	...	...	...	...	7	...	...	...	...	...
University of Idaho	4	4	...	...	...	...	...	...	...	...	...	...	8	...	5	...	...	...	...	5	...	5	...	...	...	5	...	...	...	...	4	2½	...	...	...	...
University of Illinois	3	2	...	...	...	...	...	...	2	...	...	...	...	7	...	...	...	...	*3*	...	...	...	...	[2]*6*	...	...	...	...	...	...	...	7	...	...	...	...
Purdue University (Ind.)	3	3	...	...	...	...	...	...	...	...	...	...	...	...	5	...	3½	...	5	...	...	...	...	10	...	...	...	...	3½	...	...	...	7	...	...	...
Iowa State College of Agriculture and Mechanic Arts	2	2	...	...	1	...	...	...	1	...	...	...	2	...	4	...	...	...	...	3	...	...	9	...	...	...	7	...	...	...	4	...	...	...	...	...
Kansas State Agricultural College	3	3	...	...	...	...	...	...	...	...	...	...	6	...	...	...	...	4	...	...	...	...	[3]4	...	...	6	...	...	...	...	3⅓	...	...	...	...	...
University of Kentucky	3	3	...	...	...	...	...	...	2	2	...	...	8	...	...	...	...	...	...	...	...	...	4	...	...	4	...	...	...	4	...	...	...	...	...	...
Lousiana State University and Agricultural and Mechanical College	5	5	...	...	...	...	...	...	...	...	...	...	8	...	...	...	...	...	...	...	...	...	...	...	...	8	...	...	...	...	...	...	...	...	...	...
University of Maine	3	3	...	...	...	...	...	...	3	...	...	...	4	...	5	...	...	...	5	...	...	...	5	...	4	...	...	...	...	4	...	...	...	2	...	...
Maryland State College of Agriculture	4	4	2	2	...	...	...	...	...	...	...	...	3⅓	7⅓	...	2	...	...	2⅔	...	...	...	5⅓	...	5⅓	...	...	...	...	2⅔	...	...	...	...	...	...
Massachusetts Agricultural College	3⅓	3⅓	3⅓	...	⅔	...	...	...	1	1	1	...	2	4	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...
Michigan Agricultural College	3	3	3	...	...	...	...	...	...	...	...	...	7⅓	...	...	...	...	...	...	...	...	4	...	...	...	6⅔	...	...	...	3⅓	...	...	...	...	...	...
University of Minnesota	2	2	...	...	1	...	...	...	...	...	...	...	8	...	...	...	...	...	3½	4	...	4	...	...	...	8	...	...	...	...	3½	...	...	...	...	...
Mississippi Agricultural and Mechanical College	2	4⅔	2	2	⅔	...	...	...	2	...	...	...	...	5⅓	...	...	2⅔	2⅔	...	...	...	...	...	2⅔	...	3⅓	...	...	...	...	5⅓	2⅔	...	...	...	...
University of Missouri	2	2	...	...	...	...	...	...	...	...	...	...	5	...	*5*	...	...	...	...	...	...	3	...	...	5	...	...	...	...	3	...	...	...	...	...	...

Montana State College of Agriculture and Mechanic Arts	2½	2½	...	...	...	...	...	...	...	...	...	...	4½	...	4¾	...	...	...	...	4¾	...	...	5¾	...	...	3¼	...	...	...	4½	...	...	...	...	3	...
University of Nebraska	3	3	...	...	...	...	...	...	...	...	...	...	10	...	...	...	...	...	...	6	...	...	...	...	...	9	...	...	...	...	...	6	...	...	...	...
University of Nevada	2	2	...	...	...	...	...	...	...	...	...	...	4½	...	3	3¼	...	...	...	...	...	...	...	...	4½	...	...	...	...	...	3¼	...	...	...	...	...
New Hampshire College of Agriculture and Mechanic Arts	4	4	...	...	...	...	...	...	...	...	...	...	7	...	3½	...	...	...	...	3½	...	...	3	...	6½	...	...	...	...	3¼	...	...	...	...	...	...
Rutgers College (N. J.)	3	3	...	...	1	...	...	...	...	...	...	...	...	7	...	...	...	...	2½	...	...	...	3½	[2]7	...	...	6	...	...	...	3½	...	...	...	...	...
New Mexico College of Agriculture and Mechanic Arts	3	3	...	...	...	4	...	...	...	...	...	...	7	...	3½	...	...	...	3½	...	...	3½	...	...	...	3½	...	...	...	...	5½	...	...	...	...	...
Cornell University (N. Y.)	3	3	...	...	...	...	...	...	...	...	...	...	...	11	2⅓	...	...	...	4½	3½	...	...	6½	...	...	...	...	...	...	...	...	3¼	6½	...	...	...
North Carolina College of Agriculture and Engineering	4	4	...	...	...	...	...	...	...	...	...	...	6	5	...	...	...	...	...	...	...	...	...	...	6	2	...	...	...	...	...	3	...	...	...	...
North Dakota Agricultural College	4	4	...	...	...	...	...	...	...	...	...	...	8⅔	...	2⅔	...	...	...	2⅔	...	...	...	...	[4]6	...	6	...	...	...	...	...	2⅔	...	...	...	...
Ohio State University	2	2	...	...	1	...	...	...	2	...	...	...	...	9	...	...	...	...	...	...	...	...	...	...	6	...	...	...	...	3	3	...	...	...	...	...
Oklahoma Agricultural and Mechanical College	3	3	...	...	...	...	...	...	3	...	...	...	8	3	...	...	...	...	...	...	...	4	...	...	...	4	...	...	...	...	4	...	...	...	...	...
Oregon State Agricultural College	4	4	6	...	½	...	...	...	2	2	...	...	...	...	...	...	7½	...	4	...	...	3	3	...	...	7	...	...	...	...	3	...	...	...	...	...
Pennsylvania State College	3½	2½	...	...	...	...	...	...	1	1	...	...	9	...	...	...	...	...	...	...	...	3	...	...	...	...	3½	...	...	...	4½	...	...	...	...	...
University of Porto Rico	3	3	3	3	...	...	...	...	...	...	...	...	...	6	...	...	...	...	...	8	...	...	...	4	...	...	...	...	4	4	...	...	...	...	...	...
Rhode Island State College	3	3	3	3	...	...	...	...	...	...	...	...	6	...	...	...	...	3	...	...	...	...	...	6	...	8	...	...	...	...	...	...	...	...	...	...
Clemson Agricultural College (S. C.)	3	3	5	3	...	...	...	...	...	...	...	...	2⅔	2	...	2	...	2	...	⅔	...	...	...	2⅔	...	4⅔	...	...	...	2⅔	⅔	1⅓	...	...	...	...
South Dakota State College of Agriculture and Mechanic Arts	3	4	...	...	...	...	...	...	...	...	...	...	...	10	...	...	...	...	...	...	...	...	...	...	...	...	10	...	...	10	...	...	...	...	...	...
University of Tennessee	5	5	...	...	...	...	...	...	...	...	...	...	6	...	...	...	...	3	...	3	...	...	3	...	6	...	...	...	...	...	...	3	...	...	...	...
Agricultural and Mechanical College of Texas	4	4	2	2	...	...	...	...	...	...	...	...	8	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	...	6	...	...	...	...	...
Agricultural College of Utah	5	5	5	...	...	...	...	...	...	...	...	...	...	9	...	...	...	...	...	3½	...	...	4½	3½	...	...	...	...	...	...	...	3	...	...	...	...
University of Vermont and State Agricultural College	4	4	...	...	...	...	...	...	1	1	...	...	4	8	...	...	...	...	...	...	...	...	3	...	...	6	...	...	...	...	...	...	...	...	...	...
Virginia Agricultural and Mechanical College and Polytechnic Institute	6	6	6	6	...	...	...	...	...	...	...	...	...	4	2	2	...	...	4	...	...	...	...	7	...	...	4	...	...	...	5	...	...	...	...	...
State College of Washington	2	2	...	...	...	...	...	...	1	1	...	...	...	5	...	...	...	3	...	...	...	5	...	...	2	...	...	...	...	...	...	...	...	...	...	...
West Virginia University	4	4	...	...	...	...	...	...	...	...	...	...	9	...	7	...	...	...	...	...	...	...	3½	3½	...	4½	...	...	...	4½	3½	...	...	...	...	...
University of Wisconsin	2	2	...	...	...	...	...	...	2	2	...	...	...	5	4	...	...	...	2	...	...	5	...	...	...	3	...	...	...	...	...	...	...	...	...	...
University of Wyoming	3	3	3	...	...	...	...	...	...	...	...	...	10	...	...	3½	...	...	3½	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Frequency of occurrence	49	49	17	10	9	1	0	0	16	9	1	0	33	21	17	5	4	7	15	14	1	12	20	15	10	26	6	1	2	13	19	11	3	2	1	0
Median requirement[5]	8				1				2				9				3¾				5				4½				4				5½			

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[1] Includes all phases of botany, except agricultural botany, bacteriology, and plant pathology

[2] Soil biology.

[3] Microbiology.

[4] Part of the time (3½ hours) is devoted to soil biology.

[5] Based only upon the institutions listing requirements in the subject.

TABLE 9.—*Requirements for graduation*—PART VI: *Chemistry, physics, geology, total science, total elective, total all subjects.*

[The use of italic indicates that a limited number of courses may be substituted for the one listed.]

Institutions.	Chemistry.																				Physics.				Geology.				All science subjects.				Elective work.[1]				All subjects.			
	Inorganic or general chemistry.				Qualitative analysis.				Quantitative analysis.				Organic chemistry.				Agricultural chemistry.																							
	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.	Freshman.	Sophomore.	Junior.	Senior.
Alabama Polytechnic Institute	8	...	...	...	...	6	...	...	...	...	*6*	...	...	4	...	...	...	2⅔	...	...	...	6	...	...	...	...	2⅔	...	8	32	16⅔	5⅓	...	...	...	5⅓	49⅓	53⅓	48⅓	42
University of Arizona	9	...	...	...	...	...	5½	...	...	...	...	5½	...	...	...	...	...	...	...	...	...	...	8	...	...	...	...	...	9	10	18	5½	2	8½	1	4	35	38	33	32
University of Arkansas	7	...	...	...	...	4	...	...	...	...	4½	...	...	3	...	...	...	...	3	...	...	5	...	...	...	...	...	...	13	20½	7½	3½	...	...	8	4½	38	40½	36½	36
University of California	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	4½	...	...	...	...	...	...	3	...	...	24	13	13½	4½	...	...	2	7	43	40½	34	31½
Colorado Agricultural College	...	10	...	...	...	...	...	...	...	...	...	...	...	...	10	...	...	...	...	...	...	10	...	...	...	...	2	...	7	24½	17	6	...	...	6	17⅔	41	42½	39	37⅔
Connecticut Agricultural College	...	8	...	...	...	...	...	...	...	...	...	...	...	...	*4*	...	...	...	...	*3*	...	...	...	...	...	3	...	...	8	11	11	9	12	13	...	9	40	40	35	35
Delaware College	6	...	...	...	...	1½	...	...	...	1½	...	...	...	6	...	...	...	...	6	...	...	8	...	...	...	...	...	...	12	17	18	...	2	2	2	6	39	41	35	35
University of Florida	...	10	...	...	...	...	3	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	19	18	...	...	4	2	7	36	32	32	32
Georgia State College of Agriculture	6	...	...	...	...	6	...	...	...	...	...	...	...	...	*6*	...	...	...	...	...	...	6	...	...	...	...	...	...	6	18	12	...	...	...	12	12	40	44	38	36
College of Agriculture and Mechanic Arts of the Territory of Hawaii	6½	...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	...	...	6½	...	...	6½	...	...	...	...	3½	...	13½	20	16¾	4½	...	...	9¾	11	36½	37	36½	37
University of Idaho	10	...	...	...	...	2½	...	...	...	2½	...	...	...	...	...	...	...	6	...	3	...	...	...	...	...	...	...	...	18	21	9	10½	...	...	13½	19	41½	43	40	39½
University Illinois	11	...	...	...	...	...	...	...	...	7	...	...	...	...	*5*	...	...	...	...	...	...	...	...	...	...	...	...	...	11	14	6	13	4	13	...	...	44	41½	37	32
Purdue University (Ind.)	9	...	...	...	...	10	...	...	...	...	...	10	...	...	...	...	...	...	3½	...	...	...	...	...	...	...	...	...	23	10	13½	20	...	...	...	...	50½	48½	45	50
Iowa State College of Agriculture and Mechanic Arts	10	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	4	...	...	3	...	...	...	...	3	...	...	15	11	24	3	...	...	3	16½	45	43	44	43
Kansas State Agricultural College	10	...	...	...	...	...	...	...	...	3	...	...	...	3½	...	...	...	...	...	...	...	3	...	...	...	...	...	...	16	19½	7½	...	...	...	13	11	38½	44	36½	38
University of Kentucky	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	3	...	...	19	16	4	...	...	...	2	20	36	38	36	35
Louisiana State University and Agricultural and Mechanical College	...	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	...	...	...	...	...	...	8	26	...	...	...	...	8	18	41	43	38	36
University of Maine	9	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	7	2	...	...	...	...	...	...	...	...	...	17	16	17	...	...	...	5½	18	42	42	40½	34½
Maryland State College of Agriculture	6⅔	3⅓	...	...	...	3⅓	...	...	...	...	...	...	...	...	2⅔	...	...	...	...	4	...	...	8	...	...	...	3⅓	...	15⅓	16⅔	22	6	...	...	...	...	54	54	52	52
Massachusetts Agricultural College	4	...	...	...	...	4	...	...	...	...	...	...	...	...	10⅔	...	2	...	...	...	...	4⅔	...	...	1⅓	3⅓	...	...	9⅓	18	10⅔	...	...	...	4	18	41	41	34⅓	33⅓
Michigan Agricultural College	3⅓	...	...	...	3⅓	...	...	...	...	...	...	...	3⅓	...	...	...	...	...	...	...	...	6⅔	...	...	...	3⅓	...	...	17⅓	24	...	...	...	...	30	20	44⅓	43	43	40
University of Minnesota	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	*6*	...	...	...	...	...	...	16	21	7	4	...	...	6½	9½	43	41	38	38
Mississippi Agricultural and Mechanical College	...	12	...	...	...	...	...	...	...	...	...	...	...	...	4½	...	...	...	4½	...	5½	...	...	...	2	...	3	...	10	23½	17	5½	...	...	...	14½	51½	50	48½	45
University of Missouri	5	...	...	...	...	5	...	...	...	...	...	...	...	3	...	...	...	...	3	...	5	...	...	...	...	3	...	...	20	17	8	...	...	5	7	10	34	32	31	27
Montana State College of Agriculture and Mechanic Arts	9	...	...	...	...	...	...	...	...	...	...	...	...	5½	...	...	...	5¾	...	...	5½	...	...	...	...	3	...	...	19	22	13½	4¾	...	...	10	5½	40½	41¼	40¼	39

University of Nebraska	8	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	9	...	3	...	...	...	21	15	9	12	[illegible]	5	10	9	43	37	37	37
University of Nevada	4½	...	...	...	4½	...	...	...	...	2½	...	...	...	2	...	...	...	9	...	...	...	4½	...	...	...	...	...	...	18	17¾	6½	3½	6½	6½	8¾	15½	41	41½	39	38¾
New Hampshire College of Agriculture and Mechanic Arts	6	...	...	...	...	6½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	[2]2	...	...	3	...	19½	13½	9½	5½	...	...	4	12	39	39⅔	39	37¼
Rutgers College (N. J.)	7	...	...	...	...	4½	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	7	...	...	...	...	...	7	7	18½	20½	14	...	...	...	...	40	43½	40	41
New Mexico College of Agriculture and Mechanic Arts	9	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	5	...	...	3	...	...	...	...	...	...	4	19	14	12½	4	...	...	...	6	41½	42	34	32½
Cornell University (N. Y.)	6½	...	...	...	3½	...	...	...	3½	...	...	...	...	...	...	...	...	4	...	...	5	[2]3½	...	...	...	3½	...	...	24½	21½	12⅔	6⅔	...	...	...	...	37¼	33¾	34½	33½
North Carolina College of Agriculture and Engineering	6	...	...	...	...	6	...	...	...	...	2	...	...	...	...	6	...	...	2	...	...	6	...	...	...	2	...	...	18	21	4	9	...	...	...	6	42	44	48	48
North Dakota Agricultural College	6	...	...	...	4	...	...	...	...	3½	...	...	...	6	...	...	...	...	...	...	...	...	6⅔	...	...	...	...	...	18⅔	15½	12	8⅔	...	...	...	6⅔	44⅔	48	28⅔	28⅔
Ohio State University	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	3	...	...	...	3	3	...	...	22	21	3	...	...	7	4½	20	42½	40	35½	37
Oklahoma Agricultural and Mechanical College	9	...	...	...	...	2½	...	...	...	5	...	...	...	3½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17	22	4	...	...	...	...	11	43½	41	36	35½
Oregon State Agricultural College	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	2	...	4	...	...	...	...	...	...	...	19½	18	12	...	...	...	3	7	44¼	45	41	32
Pennsylvania State College	6½	...	...	...	...	3	...	...	...	...	...	...	...	2	...	...	...	5	6	...	...	3¾	...	...	...	3½	...	...	15½	20	14	...	...	...	...	8	42	44½	45½	37
University of Porto Rico	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4	18	...	12	...	...	3	13	43	43	41	43
Rhode Island State College	8	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	4	...	...	...	5	...	...	...	2	...	...	14	26	...	6	...	...	3	16	45½	44	42½	47
Clemson Agricultural College (S. C.)	...	8½	...	...	...	...	...	...	...	...	3	...	...	...	2⅔	...	...	...	1⅓	...	...	7⅓	...	...	...	⅔	...	4	2⅔	27⅔	7⅔	10⅔	...	...	...	...	45	45	45	45
South Dakota State College of Agriculture and Mechanic Arts	15	...	...	...	...	4	...	...	...	...	...	...	...	3½	...	...	...	...	...	...	...	...	...	...	...	...	...	5	15	27½	10	5	...	...	11	24	47	45½	47	38
University of Tennessee	...	3	...	...	...	3	...	...	...	...	3	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	3	...	12	9	12	6	...	...	...	...	37	37	36	30
Agricultural and Mechanical College of Texas	8	...	...	...	...	...	3	...	...	...	...	...	...	4	...	...	...	...	3	...	6	...	...	...	...	3	...	...	22	13	12	...	...	...	...	...	42	41	40	39
Agricultural College of Utah	*12*	...	...	...	...	...	...	...	...	...	...	...	...	*3*	...	...	...	...	...	...	...	...	*8*	...	...	*3*	...	...	12	15	12½	10	4½	4½	8¼	15	38	37	37½	33½
University of Vermont and State Agricultural College	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	*3*	...	...	...	...	...	...	...	...	14	14	3	3	...	...	...	...	41	39	36	30
Virginia Agricultural and Mechanical College and Polytechnic Institute	8½	6	...	...	...	2½	...	...	...	...	3	...	...	...	6	...	...	...	...	6	8½	...	...	...	...	...	...	*5*	17	12½	24	20	...	...	...	...	57	57	57	57
State College of Washington	5	...	...	...	5	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	6	...	...	...	2	...	...	...	20	18	...	...	...	...	11	18½	39½	41	37	36½
West Virginia University	9	...	...	...	...	...	...	...	...	...	...	...	...	...	3½	...	...	...	...	*3½*	...	8	...	...	...	...	...	...	18	17	17½	7	...	...	4½	16	41	44	40	38
University of Wisconsin	10	...	...	...	...	...	...	...	...	3	...	...	...	2	...	...	...	5	...	...	...	...	6	...	...	...	...	...	10	23	12	...	...	...	15	11	38	40	34	31
University of Wyoming	...	10	...	...	...	...	4	...	...	...	4	...	...	...	...	5	...	...	...	5	...	...	...	...	...	...	...	...	10	15	11½	13½	...	2	9½	16½	37	41	39	34
Frequency of occurrence	41	11	0	0	5	18	4	0	1	8	9	2	1	20	11	2	1	17	13	7	11	20	6	1	5	16	7	5	50	50	45	33	6	11	32	40	50	50	50	50
Median requirement[3]	8⅔				4				3⅛				3¼				4				6				3				48½				20				157			

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[1] Includes only the elective work that remains after satisfying the requirements for specialization.

[2] Meteorology.

[3] Based only upon the institutions listing requirements in the subject.

TABLE 10.—*Percentage distribution of the requirements for graduation by subjects.*

Institutions.	All subjects.		Nontechnical subjects.					Science subjects.			Technical subjects			Military and physical training.			Elective.
	Collegiate credit.[1]	Semester hours.[2]	English.[3]	Foreign language.	Mathematics.	Social science.[4]	All nontechnical subjects.	"Pure science."[5]	"Applied science."[6]	All science subjects.	Agricultural subjects.[7]	Agricultural engineering.[8]	All technical subjects.	Military training.	Physical education.[9]	All military and physical training.	Elective work.
			Per cent.[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]	*Per cent.*[11]
Alabama Polytechnic Institute	[10] 388	193	11.4	3.8	5.2	3.4	*23.8*	28.0	4.1	*32.1*	25.8	8.8	*34.6*	6.7	0	*6.7*	*2.9*
University of Arizona	124	138	10.1	5.6	3.8	4.4	*25.9*	27.5	3.3	*30.8*	27.5	2.2	*29.7*	4.4	0	*4.4*	*11.2*
University of Arkansas	138	151	8.2	0	2.4	3.9	*14.5*	27.6	1.9	*29.5*	38.4	4.0	*42.4*	5.3	0	*5.3*	*8.3*
University of California	130	149	4.0	4.0	4.0	4.0	*16.1*	20.8	16.1	*36.9*	30.8	2.1	32.9	4.0	4.0	8.1	[12] *6.0*
Colorado Agricultural College	160	160	9.4	0	3.0	2.6	*15.0*	30.9	3.1	*34.0*	17.5	13.1	*30.6*	3.7	1.9	*5.6*	*14.8*
Connecticut Agricultural College	150	150	6.7	0	0	8.0	*14.7*	20.0	6.0	*26.0*	21.3	6.0	*27.3*	8.0	1.3	*9.3*	[12] *22.7*
Delaware College	150	150	6.6	8.0	2.7	4.7	*22.0*	27.3	4.0	*31.3*	27.3	2.0	*29.3*	8.0	1.3	*9.3*	*8.0*
University of Florida	132	132	7.7	0	3.0	6.0	*16.7*	28.0	4.6	*32.6*	32.7	5.2	*37.9*	3.0	0	*3.0*	*9.9*
Georgia State College of Agriculture	79	158	7.6	0	3.8	3.8	*15.2*	17.1	5.7	*22.8*	36.8	5.0	*41.8*	5.1	0	*5.1*	*15.1*
College of Agriculture and Mechanic Arts of the Territory of Hawaii	136	147	8.1	8.1	4.0	2.0	*22.2*	32.8	4.4	*37.2*	19.4	6.8	*26.2*	0	0	*0*	*14.1*
University of Idaho	142	164	6.1	0	0	0	*6.1*	27.2	8.5	*35.7*	31.1	2.4	*33.5*	4.9	0	*4.9*	*19.8*
University of Illinois	130	154½	6.5	0	0	7.1	*13.6*	20.7	7.8	*28.5*	37.6	4.8	*42.4*	3.2	1.3	*4.5*	[12] *11.0*
Purdue University (Ind.)	169	194	6.2	6.2	3.1	6.1	*21.6*	25.5	8.8	*34.3*	37.4	3.6	*41.0*	3.1	0	*3.1*	*0*
Iowa State College of Agriculture and Mechanic Arts	143⅓	175	5.8	0	1.7	2.8	*10.3*	21.7	8.6	*30.3*	39.7	5.1	*44.8*	2.2	1.2	*3.4*	*11.1*
Kansas State Agricultural College	136	157	7.6	0	0	0	*7.6*	20.4	7.0	*27.4*	41.6	4.3	*45.9*	3.8	0	*3.8*	*15.3*
University of Kentucky	145	145	6.9	0	0	2.0	*8.9*	23.4	3.5	*26.9*	35.0	7.0	*42.0*	4.1	2.8	*6.9*	*15.2*
Louisiana State University and Agricultural and Mechanical College	136	158	3.8	0	3.8	0	*7.6*	21.5	0	*21.5*	36.8	11.3	*48.1*	6.3	0	*6.3*	[12] *16.5*
University of Maine	150	159	6.3	3.2	3.1	0	*12.6*	22.6	8.8	*31.4*	29.2	6.3	*35.5*	3.8	1.9	*5.7*	*14.8*
Maryland State College of Agriculture	318	212	11.0	5.7	1.5	10.7	*28.9*	25.3	3.0	*28.3*	31.2	5.9	*37.1*	5.7	0	*5.7*	*0*
Massachusetts Agricultural College	220	149⅔	10.2	8.0	6.7	9.3	*34.2*	22.0	3.4	*25.4*	16.5	0	*16.5*	6.7	2.0	*8.7*	*15.3*
Michigan Agricultural College	240	170⅓	5.9	0	2.7	2.0	*10.6*	24.2	0	*24.2*	27.0	3.5	*30.5*	5.3	0	*5.3*	*29.4*
University of Minnesota	144	160	7.5	0	1.9	7.5	*16.9*	21.2	8.8	*30.0*	32.2	7.8	*40.0*	2.5	0.6	*3.1*	*10.0*
Mississippi Agricultural and Mechanical College	292	194⅔	6.1	0	6.5	5.5	*18.1*	22.1	6.5	*28.6*	33.2	5.8	*39.0*	5.5	1.3	*6.8*	*7.4*
University of Missouri	124	124	4.9	0	0	4.0	*8.9*	33.9	2.4	*36.3*	33.8	0	*33.8*	3.2	0	*3.2*	*17.7*
Montana State College of Agriculture and Mechanic Arts	150	161	6.2	0	1.8	2.4	*10.6*	24.1	12.7	*36.8*	36.0	4.0	*40.0*	3.1	0	*3.1*	*9.5*
University of Nebraska	125	154	5.2	0	0	7.1	*12.3*	24.0	13.0	*37.0*	24.7	6.5	*31.2*	3.9	0	*3.9*	[12] *15.6*
University of Nevada	148	160	3.8	0	0	4.5	*8.3*	20.6	7.6	*28.2*	25.2	12.5	*37.7*	2.5	0	*2.5*	*23.2*
New Hampshire College of Agriculture and Mechanic Arts	144	155	3.9	0	2.6	4.5	*11.0*	26.6	4.4	*31.0*	35.3	7.2	*42.5*	5.2	0	*5.2*	*10.3*

Rutgers College (N. J.)	146	164½	6.1	8.5	6.0	8.5	*29.1*	30.8	5.8	*36.6*	27.1	3.0	*30.1*	3.7	0.6	*4.3*	*0*
New Mexico College of Agriculture and Mechanic Arts	150	150	4.0	0	0	3.4	*7.4*	23.7	9.3	*33.0*	40.3	8.7	*49.0*	4.0	2.7	*6.7*	*4.0*
Cornell University (N. Y.)	120	139¼	5.8	0	0	8.1	*13.9*	35.7	11.0	*46.7*	30.3	4.9	*35.2*	4.3	0	*4.3*	[12] *0*
North Carolina College of Agriculture and Engineering	182	182	9.9	2.2	5.5	5.5	*23.1*	22.5	6.1	*28.6*	35.7	5.0	*40.7*	4.4	0	*4.4*	*3.3*
North Dakota Agricultural College	225	150	5.8	0	0.9	3.5	*10.2*	34.7	1.8	*36.5*	41.3	2.2	*43.5*	5.3	0	*5.3*	*4.4*
Ohio State University	142	155	2.6	0	1.9	3.9	*8.4*	21.9	7.7	*29.6*	29.7	7.4	*37.1*	2.6	2.0	*4.6*	[12] *20.3*
Oklahoma Agricultural and Mechanical College	134	156	6.4	0	0	3.2	*9.6*	27.6	0	*27.6*	43.6	6.4	*50.0*	3.9	1.9	*5.8*	*7.1*
Oregon State Agricultural College	136	162¼	4.2	0	0	5.5	*9.7*	11.1	19.3	*30.4*	38.9	3.4	*42.3*	8.6	2.8	*11.4*	*6.2*
Pennsylvania State College	160	169	7.1	7.1	2.9	7.1	*24.2*	21.0	8.3	*29.3*	33.1	3.9	*37.0*	3.5	1.2	*4.7*	*4.7*
University of Porto Rico	170	170	3.5	0	0	7.1	*10.6*	10.7	9.3	*20.0*	46.0	7.0	*53.0*	7.1	0	*7.1*	*9.4*
Rhode Island State College	179	179	11.8	6.7	2.8	5.2	*26.5*	21.8	3.9	*25.7*	26.5	3.9	*30.4*	6.7	0	*6.7*	*10.6*
Clemson Agricultural College (S. C.)	[10] 360	180	13.3	0	7.4	8.9	*28.9*	24.1	2.9	*27.0*	26.8	9.5	*36.3*	7.8	0	*7.8*	*0*
South Dakota State College of Agriculture and Mechanic Arts	146	177½	7.9	9.0	0	5.1	*22.0*	29.6	2.8	*32.4*	22.0	0	*22.0*	3.9	0	*3.9*	*19.7*
University of Tennessee	140	140	8.5	8.6	4.3	4.3	*25.7*	23.6	4.2	*27.8*	39.3	0	*39.3*	7.1	0	*7.1*	*0*
Agricultural and Mechanical College of Texas	162	162	9.8	0	0	6.2	*16.0*	25.3	3.7	*29.0*	40.7	6.8	*47.5*	7.4	0	*7.4*	*0*
Agricultural College of Utah	132	146	2.8	8.2	0	8.2	*19.2*	27.0	6.9	*33.9*	14.5	0	*14.5*	10.3	0	*10.3*	[12] *22.1*
University of Vermont and State Agricultural College	152	152	9.2	3.9	5.3	5.9	*24.3*	16.5	5.9	*22.4*	39.5	7.2	*46.7*	5.3	1.3	*6.6*	*0*
Virginia Agricultural and Mechanical College and Polytechnic Institute	[10] 468	228	7.9	7.9	5.3	1.7	*22.8*	27.0	5.2	*32.2*	26.1	8.4	*34.5*	10.5	0	*10.5*	*0*
State College of Washington	154	154	6.8	13.0	0	6.5	*26.3*	22.7	2.0	*24.7*	23.4	2.6	*26.0*	2.6	1.3	*3.9*	*19.1*
West Virginia University	144	163	6.2	0	0	6.1	*12.3*	30.0	6.5	*36.5*	31.9	1.8	*33.7*	4.9	0	*4.9*	*12.6*
University of Wisconsin	143	143	4.2	5.6	3.5	3.5	*16.8*	19.6	11.9	*31.5*	24.1	3.9	*28.0*	2.8	2.8	*5.6*	[12] *18.2*
University of Wyoming	126	151	4.0	0	6.6	0	*10.6*	27.5	5.6	*33.1*	23.8	8.0	*31.8*	6.0	0	*6.0*	*18.5*
Mean number	....	164.9	6.8	2.7	2.4	4.7	*16.6*	24.4	6.2	*30.6*	31.3	5.1	*36.5*	4.9	0.7	*5.6*	*10.7*

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[1] In this column is shown the number of credits required for graduation according to the institution's method of awarding credit. In most cases the figures represent semester-hours, but in a few cases, where the college year is divided into three terms, they represent "term hours," which are one-third lower in value. In one case, Georgia State College, the credits represent year hours, which have twice the value of semester hours.

[2] In this column is shown the number of credits required for graduation on the basis of corrected semester-hours. The numbers are the result of an attempt to make correction for varying methods of awarding credit.

[3] Under English are included grammar, composition, rhetoric, literature, library practice, argumentation, public speaking, and journalism.

[4] Under this head are included such subjects as history, civil government, economics, sociology, education (including psychology), etc.

[5] Under pure science are included general biology, general botany, plant morphology, physiology, general bacteriology, general zoology, embryology, general entomology, general chemistry, qualitative and quantitative analysis, organic chemistry, general physics, astronomy, meteorology, and geology.

[6] Under applied science are included those subjects that are more closely related to technical agriculture, such as agricultural botany, agricultural bacteriology, agricultural chemistry, economic entomology, etc.

[7] Includes veterinary subjects.

[8] Agricultural engineering includes surveying, drawing, irrigation, drainage, farm machinery, farm mechanics, farm structures, etc.

[9] Includes personal hygiene and human physiology.

[10] No distinction is made between recitation and laboratory credits.

[11] Percentage is based upon the total corrected semester hours.

[12] In this analysis many elective courses have been included to meet the requirements for students specializing in agronomy. The numbers listed, therefore, represent the amount of elective work required after satisfying the requirements for specialization.

TABLE 11.—*Summary distribution of work for graduation, by years.*

Years and hours.	Nontechnical subjects.						Technical subjects.					
	English.[1]	Foreign language.	Mathematics.	Social science.[2]	All nontechnical.	Science.[3]	Agriculture.[4]	Agricultural engineering.[5]	All technical subjects.	Military and physical training.[6]	Elective.[7]	All subjects.
Freshman year:												
Number of colleges	49	15	28	12	50	50	42	32	48	49	6	50
Maximum hours	11	8	12	6	26	24½	20	14⅓	24	7	12	57
Minimum hours	4	4	3	½	3	2⅔	1	1	2	2	2	34
Median hours[8]	6	6	6	3	12	15½	8¾	3¾	10	4	4¼	41¼
Sophomore year:												
Number of colleges	29	13	6	5	38	50	47	18	50	49	11	50
Maximum hours	6	8	6	9	15½	32	26	12	29½	7	13	57
Minimum hours	2	4	1½	2⅔	1⅓	9	2	1⅓	3	2	2	32
Median hours[8]	4	6	4½	5⅔	6	18	12	3¼	12	3	5	41¼
Junior year:												
Number of colleges	16	5	......	28	37	45	50	22	50	17	32	50
Maximum hours	6	10	......	12	15	24	30	12	30	6	30	57
Minimum hours	1	3⅓	......	2⅔	1	3	2	2	2	2	1	28⅔
Median hours[8]	4	5	......	5	6	12	14½	3¾	15	3	6¾	38
Senior year:												
Number of colleges	6	4	......	32	33	33	50	19	50	10	40	50
Maximum hours	4⅔	10	......	10	15	20	28	7	34	6	24	57
Minimum hours	2	2	......	2	2	3	2½	⅔	2½	2	4	27
Median hours[8]	4	7	......	6	6	6	17½	4	18	3	11½	37
All years:												
Number of colleges	50	20	32	45	50	50	50	45	50	49	41	50
Maximum hours	24	20	13⅓	22⅔	61⅓	73½	78	21	90	24	50	228
Minimum hours	4	4	1⅓	3	10	34	21¼	3	21¼	4	5⅓	124
Median hours[8]	10	12	5	8	23	48⅓	51	9	60½	8	20	157

[1] Includes literature, composition, rhetoric, argumentation, public speaking, journalism, and library practice.
[2] Includes history, civil government, economics, sociology, and education.
[3] Includes, in addition to pure science courses, all science subjects closely related to agriculture, such as agricultural chemistry, economic entomology, etc.
[4] Includes veterinary subjects in addition to the strictly agricultural subjects.
[5] Includes drawing, shopwork, surveying, irrigation, drainage, farm structures, and farm equipment.
[6] Courses in personal hygiene and human physiology are classed under physical training.
[7] Includes only the elective work remaining after satisfying the requirements for specialization.
[8] In determining the median number in each case, only those colleges requiring the subject were considered.

TABLE 12.—*Average distribution of the required work for the degree of B. S. in agriculture, covering the high-school period, the college period, and the two periods combined.*

Subjects.	For admission.		For graduation.		For 8-year period.	
	Number of institutions requiring subject.	Average per cent.	Number of institutions requiring subject.	Average per cent.	Number of institutions requiring subject.	Average per cent.
English	48	20.3	50	6.8	50	13.5
Foreign language	18	14.3	20	6.7	27	10.5
Mathematics	48	15.7	32	3.7	48	9.7
Social science	36	8.2	45	5.2	49	6.7
Science	34	8.7	50	30.6	50	19.6
Technical subjects	0	....	50	36.5	50	18.3
Military and physical training	0	....	49	5.7	49	2.8
All prescribed subjects	48	54.1	50	89.3	50	71.6
Elective sub ects	48	45.9	41	10.7	50	28.3

APPENDIX.

OUTLINE REQUIREMENTS FOR GRADUATION.

The work required for graduation in agriculture by the several institutions is shown in the outlines on the following pages. In all cases, except those indicated, the requirements are for specialization in agronomy or farm crops. In many cases the outlines include, in addition to the prescribed work, certain courses that have been selected to meet the major and minor requirements. In a few cases, where a liberal elective system prevails, a large part of the schedule has been filled in either by the writer or by an officer of the institution concerned. In all cases, except four, the schedules have been approved by some officer of the institution concerned. In the cases of the four exceptions, the outlines were not returned, and are therefore assumed to be correct.

The asterisk (*) attached to the name of a course indicates that the work is not an absolute requirement. In many cases it indicates the courses that have been added to meet major or minor requirements. In other cases it indicates that a limited degree of substitution is permitted.

In many cases the credit for the required work is shown in two or more columns. In the first column, in each case, is shown the institution's credit rating and in a parallel column is shown an adjusted rating, which is an attempt to make correction for the varying methods for awarding credit. The adjustment in most cases represents either a change from term-hours to semester-hours or an increased credit to make up for extra work required in laboratory or field practice. Since a large proportion of the institutions require but two hours of laboratory work as the equivalent of one hour of lecture or recitation work, this has been adopted as a basis of comparison. The adjustment is not entirely satisfactory, but materially assists in bringing all the institutions on a common basis from the standpoint of required work.

These outlines are presented mainly to show the source of the data upon which the tables concerning graduation are based. In many cases catalogues showing some variation in requirements have been received since making the tables. The modifications in most cases were unimportant and did not seem to warrant the remodeling of the tables. It is believed also that the assembled outlines, showing the requirements for graduation in a common subject, should be of service to officials charged with the responsibility for planning courses of study and to high-school officials who are called upon to advise prospective college students concerning collegiate courses.

ALABAMA POLYTECHNIC INSTITUTE.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	College credits (hrs. per wk.).	Term hours (2-hr. lab. basis).	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits (hrs. per wk.).	Term hours (2-hr. lab. basis).	Semester-hours (2-hr. lab. basis).
English composition	7	7	4⅔	Argumentation	9	9	6
English literature	8	8	5⅓	European history	4	4	2⅔
Plane trigonometry	5	5	3⅓	Common crops	4	3	2
United States history	6	6	4	General zoology	10	8	5⅓
Advanced algebra	10	10	6⅔	General botany	18	12	8
Surveying	10	5	3⅓	Physics	9	9	6
Drawing	15	7½	5	Organic chemistry	6	6	4
Shopwork	18	9	6	Qualitative chemistry	18	9	6
General chemistry	12	12	8	Agricultural chemistry	4	4	2⅔
Military drill	9	4½	3	Stock judging	6	3	2
				Farm accounts	2	1½	1
				Plant propagation	6	4	2⅔
				Small grains	4	3	2
				Military drill	9	4½	3
Total	100	74	49⅓	Total	109	80	53⅓
JUNIOR YEAR.				SENIOR YEAR.			
English literature*	9	9	6	Cotton	6	4	2⅔
Dairying	4	4	2⅔	General entomology	5	4	2⅔
Agricultural bacteriology	6	4	2⅔	Economic entomology	5	4	2⅔
Veterinary science	15	12	8	Soils	15	15	10
Drainage	4	3	2	Farm management	4	3	2
Landscape gardening	2	2	1⅓	Farm machinery	2	1	⅔
Vegetable gardening	8	6	4	Forestry	5	4	2⅔
Orchard technique	2	1	⅔	Thesis	12	6	4
Stock judging	8	4	2⅔	Modern language	11	11	7⅓
Quantitative analysis	18	9	6	Military science	3	3	2
Geology	4	4	2⅔	Elective (limited)	8	8	5⅓
Physiological botany	12	8	5⅓				
Military tactics	3	3	2				
Military drill	9	4	2⅔				
Total	104	73	48⅔	Total	76	63	42

UNIVERSITY OF ARIZONA.

dents are not required to follow any prescribed schedule, even in the first year. gestive outline is presented only for the guidance of students. Of the 124 credit required for graduation, 86 hours are prescribed, but, except for prerequisite ements, they may be taken at any time. The following outline shows the sted schedule with selected courses of the agronomy group included:

RESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
h exposition	3	3	Modern language	4	4
entation	3	3	Biology (general)	4	5
n language	4	4	Botany (physiology)	4	5
stry (general)	8	9	Soil physics	4	4½
a	3	3	Soil fertility	4	4½
ometry (plane)	2	2	Stock judging	3	3½
rops	3	3	Elective (limited)	7	8½
ng (mechanical)	2	3	Military tactics	2	3
e (limited)	2	2			
y tactics	2	3			
tal	32	35	Total	32	38

JUNIOR YEAR.			SENIOR YEAR.		
n language or literature	4	4	Modern language or literature	4	4
reeding	3	3	Economics (general)	6	6
s (general)	8	8	Farm management	3	3½
roduction	3	3	Vegetable gardening	3	3
ropagation	3	4	Dry farming	3	3
cteriology	4	4½	Agronomy literature	3	3
stry (qualitative)	4	5½	Chemistry (quantitative)	4	5½
e (free)	1	1	Elective (free)	4	4
tal	30	33	Total	30	32

UNIVERSITY OF ARKANSAS.

RESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
rops	6	6	Soil physics	5	6
of live stock	3	3	Chemistry (organic)	3	3
y (general)	6	6	Chemistry (qualitative)	3	4
stry (elementary)	6	7	Mathematics	4	4
sition and rhetoric	6	6	Physics (general)	5	5
propagation	3	3	Entomology (general)	3	3½
ork	2	3	Bacteriology	5	5
			Stock judging	3	3
y science and tactics	2	4	Drawing (mechanical)	2	2
			Surveying	1	1
			Military science and tactics	2	4
tal	34	38	Total	36	40½

JUNIOR YEAR.			SENIOR YEAR.		
sition	6	6	Economics (rural)	6	6
stry (quantative)	3	4½	Farm management	6	6
stry (agricultural)	3	3	Soil fertility	5	6
and feeding	3	3	Plant pathology	3	3½
rops	6	6	Thesis	4	4
y	6	6	Feeds and feeding	6	6
e (approved)	7	8	Elective (approved)	4	4½
tal	34	36½	Total	34	36

UNIVERSITY OF CALIFORNIA.

In the following table 20 hours' work in agronomy and allied subjects has been included to meet the requirements for specialization in agronomy.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
Botany (general)	6	8	Modern language	6	6
Chemistry (inorganic)	10	10	Chemistry (agricultural)	5	6
Bacteriology	4	6	Surveying	3	3
Mathematics	6	6	Geology	3	3
English	6	6	Zoology (general)	4	4
Physical education (gymnastics)	1	2	Genetics	4	4½
Physical education (hygiene)	2	2	Plant propagation	4	4½
Military drill	1½	2	Soil technology	4	4½
Military science	1	1	Physical education (gymnastics)	1	2
			Military drill	1½	2
			Military science	1	1
Total	37½	43	Total	36½	40½
JUNIOR YEAR.			**SENIOR YEAR.**		
Summer practice	6	6	Thesis	4	5
Botany (economic)	3	4	Farm management *	3	3
Economics	3	3	Conference (agronomy) *	1	1
Economics (rural)	3	3	Soil bacteriology *	3	4½
Cereals *	3	3	Elective (agricultural)	9	11
Crop production *	3	3	Elective (approved)	6	7
Soil chemistry *	3	4½			
Plant diseases *	4	5			
Elective (approved)	2	2½			
Total	30	34	Total	26	31½

COLORADO AGRICULTURAL COLLEGE.

FRESHMAN YEAR.	College credits (semester-hours).	SOPHOMORE YEAR.	College credits (semester-hours).
Stock judging	2	Farm crops	3
Botany general	5	Soils	3
Botany (agricultural)	2	Stock judging	2
Rural architecture	3	Chemistry (inorganic)	10
Shopwork	4	Zoology (general)	4⅓
Surveying	5	Physics	10
Physiology	3	Plant propagation	3
English literature	4	Argumentation	5
Composition and rhetoric	6	Military drill	2
Algebra	2½		
Trigonometry	2½		
Military drill	2		
Total	41	Total	42⅓
JUNIOR YEAR.		**SENIOR YEAR.**	
Farm crops (laboratory)	3	Farm crops (advanced)	3
Soils (laboratory)	2	Farm management	3
Farm machinery	6	Plant breeding	3
Irrigation	3	Genetics (general)	1
Botany (anatomy)	2	Economics (general)	2
Botany (physiology)	3	Irrigation law	2
Chemistry (organic)	10	Bacteriology	2
Geology	2	Embryology	1
Military drill	2	Plant pathology	3
Elective (approved)	6	Electives (approved)	17⅔
Total	39	Total	37⅔

CONNECTICUT AGRICULTURAL COLLEGE.

Since most of the work of the last two years is elective, this schedule includes, in addition to the required work, certain courses that are recommended for students specializing in agronomy.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Types and breeds of live stock	3	Soil management	3
Field crops	3	Farm machinery	3
Shopwork and drawing	3	Farm management	3
Botany (general)	4	Geology (general)	3
Zoology	4	Chemistry (inorganic)	8
English	6	English	4
Military training	3	Military training	3
Physical training	2	Elective (approved)	13
Elective (approved)	12		
Total	40	Total	40

JUNIOR YEAR.		SENIOR YEAR.	
History (constitutional)	6	Soil bacteriology*	3
Economics (general)	6	Farm management surveys*	3
Field crops (advanced)*	6	Chemistry (agricultural)*	3
Bacteriology (general)*	4	Plant pathology*	3
Genetics*	3	Field crops*	4
Plant physiology*	3	Soil fertility*	4
Organic chemistry*	4	Agricultural engineering*	3
Military training	3	Military training	3
		Electives (approved)	9
Total	35	Total	35

DELAWARE COLLEGE.

The following outline includes 18 hours work in selected courses to meet the requirements for specialization in agronomy.

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Composition	6	English literature	4
Geometry	2	Modern language	6
Trigonometry	2	Chemistry (organic)	6
Modern language	6	Chemistry (qualitative)	1½
History	1	Chemistry (quantitative)	1½
Botany (general)	6	Physics	8
Chemistry (inorganic)	6	Physical training (gymnastics)	1
Agriculture (general)	4	Military science	3
Physical training (gymnastics)	1	Animal husbandry (elective)	4
Elective (limited)	2	Horticulture (elective)	4
Military science	3	Elective (free)	2
Total	39	Total	41

JUNIOR YEAR.		SENIOR YEAR.	
Zoology	6	Sociology	3
Bacteriology	6	Economics	3
Chemistry (agricultural)	6	Genetics	3
Military science	3	Farm management	3
Field crop production	3	Thesis	3
Cereal crops	3	Military science	3
Soil fertility	6	Forage crops	3
Elective (free)	2	Farm equipment	3
		Plant breeding	2
		Soils (investigation)	3
		Elective (free)	6
Total	35	Total	35

UNIVERSITY OF FLORIDA.

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Agronomy (general)	4	Fertilizers	3
Plant propagation	4	Trucking	4
Types and breeds of animals	4	Chemistry (inorganic)	10
Farm machinery	4	Botany (physiology)	3
Botany (general)	6	Zoology (general)	6
Rhetoric (advanced)	6	Military science	2
Trigonometry (plane)	4	Elective (approved)	4
Seminar (agricultural)	1		
Library practice	1		
Military science	2		
Total	36	Total	32
JUNIOR YEAR.		SENIOR YEAR.	
Field crops	3	Farm management	6
Forage crops	3	Landscape gardening	2
Soil technology	6	Agricultural engineering	3
Chemistry (qualitative)	3	Soil fertility	3
Chemistry (quantitative)	3	Economics or rural sociology	6
Plant pathology	3	Extension teaching	2
Bacteriology (general)	3	Agricultural journalism	3
Bacteriology (agricultural)	3	Elective (approved)	7
Entomology	3		
Elective (approved)	2		
Total	32	Total	32

GEORGIA STATE COLLEGE OF AGRICULTURE.

In the following outline certain causes have been added to meet the minor group requirements.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Year-hours.	Semester-hours.	SOPHOMORE YEAR.	Year-hours.	Semester-hours.
Cereals	2	4	Live stock (breeds)	2	4
Live stock (types and classes)	1	2	Live stock (judging)	1	2
Agricultural engineering (general)	3	6	Botany (agricultural)	3	6
Fruit growing	1	2	Chemistry (qualitative)	3	6
Propagation, etc.	1	2	History	1½	3
Truck gardening	1	2	Economics	1½	3
Rhetoric	3	6	English literature	3	6
Chemistry (elementary)	3	6	Physics (elementary)	3	6
Trigonometry	2	4	Soil physics	1½	3
Algebra	1	2	Soil fertility	1½	3
Military drill	1	2	Military drill	1	2
Military science	1	2			
Total	20	40	Total	22	44
JUNIOR YEAR.			SENIOR YEAR.		
Major:			*Major:*		
Grasses and forage crops	3	6	Soil management	3	6
Soil formations	2	4	Farm crops	3	6
Drainage and irrigation	1	2			
Minor:			*Minor:*		
Chemistry (organic)*	3	6	Farm management*	3	6
Entomology (economic)*	1½	3	Genetics*	3	6
Bacteriology*	1½	3	Elective (free)	6	12
Elective (free)	6	12			
Military drill	1	2			
Total	19	38	Total	18	36

COLLEGE OF HAWAII.

Curriculum in General Agriculture.

FRESHMAN YEAR.	College credits.	Semester-hours. (2 hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours. (2 hr. lab. basis).
English composition	6	6	English literature	6	6
Modern language	6	6	Modern language	6	6
Trigonometry	3	3	Qualitative analysis	6	7
Algebra (advanced)	3	3	Zoology (general)	3	3¼
Chemistry (general)	6	6½	Plant physiology	3	3¼
Botany (general)	6	7	Surveying	4	5
Drawing	4	5	Physics	6	6½
Physics (6 hours) for conditioned students	......	......			
Total	34	36½	Total	34	37
JUNIOR YEAR.			SENIOR YEAR.		
Entomology (general)	6	7	Tropical crops	3	3
Agriculture (general)	10	10	Temperate Zone crops	2	2
Agricultural chemistry	6	6½	Plant breeding	3	3¼
Geology	3	3½	Cane sugar production	4	4
Elective	9	9½	Breeds of live stock	3	3¼
			Animal nutrition, care, feeding	3	3
			Economics	3	3
			Bacteriology	3	4½
			Elective	10	11
Total	34	36½	Total	34	37

UNIVERSITY OF IDAHO.

FRESHMAN YEAR.	University credits.	Semester-hours. (2 hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester-hours. (2 hr. lab. basis).
English literature	4	4	Composition	4	4
English composition	2	2	Chemistry (qualitative and quantitative)	4	5
Chemistry (general)	8	10	Zoology (general)	4	5
Botany (general)	6	8	Bacteriology	4	5
Field crops	4½	5	Agricultural chemistry	5	6
Live stock (market types)	2⅔	3	Horticulture (general)	3	3
Dairying (elements)	1⅔	2	Live stock (breeds)	2⅓	3
Nursery practice	1⅔	2	Milk production	3	3
Shop work (wood)	1	1½	Soils (physics and fertility)	4½	5
Military drill	2	2	Military drill	2	2
Military regulations	2	2	Military regulations	2	2
Total	35½	41½	Total	37⅚	43
JUNIOR YEAR.			SENIOR YEAR.		
Plant physiology	4	5	Plant pathology	4	5
Farm management	3	3	Plant breeding	2	2
Farm surveying	2	2½	Crop improvement	2	2
Soils (classification)	2	2	Thesis	2	3
Forage crops	3⅔	4	Seminar	2	3
Entomolgy	3	4	Soil chemistry	2⅓	3
Soil management	2⅔	3	Entomology	2	2½
Animal nutrition	3	3	Elective (free)	17⅔	19
Elective (free)	12⅔	13½			
Total	36	40	Total	34	39½

UNIVERSITY OF ILLINOIS.

The following outline contains the prescribed work and selected subjects to meet the requirements for a student specializing in agronomy. Only the work of the first two years is prescribed by the university. Within wide limits the work of the junior and senior years is elective; the selection of studies for these years shown below has been approved by the dean's assistant as constituting a satisfactory program for a student specializing in agronomy.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	University credits.	Semester-hours. (2-hr. lab. basis.)	SOPHOMORE YEAR.	University credits.	Semester-hours. (2-hr. lab. basis.)
Country-life problems	1	2	Genetics	1	2
Farm crops	4	5	Stock feeding	2	3
Chemistry (inorganic)	8	11	Botany (general)	5	7
Horticulture (elementary)	4	6	Farm mechanics	3	3½
Live stock judging	3	3	Chemistry (quantitative)	5	7
Dairying (elementary)	1	2	English writers	4	4
Rhetoric and themes	6	6	Military drill	2	2
Gymnastics and hygiene	2	2	Elective (free)	10	13
Military drill	2	2			
Drill regulations	1	1			
Elective (free)	4	4			
Total	36	44	Total	32	41½
JUNIOR YEAR.			SENIOR YEAR.		
Field machinery *	3	4	Soil fertility (advanced) *	2	3
Farm crops (advanced) *	3	3	Soil biology *	5	6
Special crops *	5	5	Plant breeding *	2	2
Soil physics and management *	5	7	Thesis *	7	7
Soil fertility *	5	7	Farm management *	3	3
Chemistry (organic) *	3	3	Entomology (elementray) *	4	4
Plant diseases *	3	3	Entomology (economic) *	3	3
Economics *	3	3	American government *	2	2
Marketing farm produce *	2	2	Agricultural cooperation *	2	2
Total	32	37	Total	30	32

PURDUE UNIVERSITY.

FRESHMAN YEAR.	University credits.	Semester-hours. (2-hr. lab. basis.)	SOPHOMORE YEAR.	University credits.	Semester-hours. (2-hr. lab. basis.)
Drawing farm buildings	2	3	Soils	3	3½
Live stock judging	5	6	Field crops	3	3½
Botany (agricultural)	3	3½	Soil fertility	3	3½
Biology (general)	6	7	Farm mechanics	3	4
Chemistry (general)	8	9	Live stock management	4	4½
English (composition)	6	6	Milk	3	3½
Trigonometry	3	3	English literature	6	6
Algebra	3	3	Fruit growing	3	3½
Entomology	3	3½	Vegetable gardening	3	3½
Poultry	3	3½	Chemistry (qualitative)	8	10
Military drill	2	3	Military drill	2	3
Total	44	50½	Total	41	48½
JUNIOR YEAR.			SENIOR YEAR.		
Genetics	3	3	Farm management	6	6
Animal nutrition	3	3	Economics	6	6
History	6	6	Thesis	4	5
Soils	4	5	Soils	3	3½
Field crops	4	5	Field crops	3	3½
Chemistry (agricultural)	3	3½	Bacteriology	4	5
Soil fertility	3	3½	Soil bacteriology	4	5
Fungous diseases	4	5	Chemistry (quantitative)	8	10
Vegetable physiology	4	5	Modern language	6	6
Modern language	6	6			
Total	40	45	Total	44	50

IOWA STATE COLLEGE.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	College credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
Shopwork	2	3	Grain judging	2	3
Live stock (types)	4	5	Surveying	2⅔	3
Chemistry (general)	8⅔	10	Farm machinery	2⅔	3
Crop production	5⅔	6	Forage crops	2⅔	3
Farm dairying	2⅔	3	Soil physics	3⅓	4
Horticulture (general)	2⅔	3	Live stock (breeds)	6⅔	8
Graphic methods	⅔	1	Chemistry (organic)	3⅔	4
Plant morphology	1⅓	2	Chemistry (agricultural)	3⅓	4
Farm forestry	2	2	English composition	6	6
Mathematics	3	3	Geology	2⅔	3
Physics	3	3	Military drill	0	2
Physical education (gymnastics)	0	1			
Physical education (hygiene)	0	1			
Military drill	0	2			
Library instruction	0	0			
Total	35⅔	45	Total	35⅔	43
JUNIOR YEAR.			SENIOR YEAR.		
Soil fertility	3⅓	4	Crop production *	4	6
Soil bacteriology	3⅓	4	Farm crops seminar	1	1½
Bacteriology (general)	4	5	Thesis and reports	2	3
Plant embryology	1⅔	3	Soil management	2	2
Economics (agricultural)	3	3	Journalism	2	2
Zoology (general)	3⅓	4	Plant pathology	2⅔	3
Entomology (economic)	3⅓	4	Truck farming	2	2
Plant breeding (horticultural)	2⅔	3	Animal feeding	3	3
Plant breeding (agronomical)	2	2½	Agricultural economic history	2	2
Farm crops seminar	1	1½	Argumentation *	2	2
Vegetable physiology	3⅓	4	Elective (free)	13⅓	16½
Farm management	2⅔	3			
Elective (free)	2⅓	3			
Total	36	44	Total	36	43

KANSAS STATE AGRICULTURAL COLLEGE.

Selected major and minor electives, appropriate for students specializing in agronomy, are included.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	College credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
College rhetoric	6	6	Chemistry (organic)	3	3½
Composition and literature	4	4	Chemistry (quantitative)	2	3
Chemistry (general)	10	10	Agricultural physics	3	3
Botany (general)	3	3	Zoology (general)	5	6
Plant physiology	3	3	Dairying (elements)	3	3½
Plant propagation	3	3	Anatomy and physiology	5	6
Live stock types	3	4	Grain crop production	3	3½
Dairy judging	1	1½	Forage crop production	3	3½
Library methods	1	1	Plant pathology	3	4
Military science	2	3	Farm poultry	2	2½
			Orcharding	2	2½
			Military science	2	3
Total	36	38½	Total	36	44
JUNIOR YEAR.			SENIOR YEAR.		
Principles of feeding	3	3	*Major elective:*		
Plant breeding	3	4	Farm management *	5	6
Soils	4	4½	Grain crops *	2	2½
Soil fertility	3	3½	Forage crops *	2	2½
Agricultural microbiology	3	4	Dry land farming *	3	3½
Agricultural journalism	1	1	*Minor elective:*		
Entomology (general)	3	3½	Milk production *	3	3½
Elective (limited)	6	6½	Pork production	2	2
Elective (free)	6	6½	Farm motors	6	7
			Elective (free)	9	11
Total	32	36½	Total	32	38

UNIVERSITY OF KENTUCKY.

In the following outline six courses have been added to meet the requirements of the agronomy option.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	University credits.	SOPHOMORE YEAR.	University credits.
Stock judging	6	Forage crops *	3
Botany (morphology)	4	Cereal crops	4
Botany (systematic)	4	English literature	4
Chemistry (inorganic)	11	Chemistry (agricultural)	5
English composition	6	Entomology	4
Military science	3	Horticulture (elementary)	3
Physical training (gymnastics)	2	Zoology	4
		Geology	3
		Anatomy and physiology of farm animals	3
		Physical training	2
		Military science	3
Total	36	Total	38
JUNIOR YEAR.		SENIOR YEAR.	
Economics (agricultural)	3	Farm engineering *	4
Soil physics	4	Soil physics (advanced) *	4
Soil fertility	5	Farm management (advanced)*	3
Bacteriology	4	Field crops *	2
Pomology	3	Soil fertility (advanced)*	2
Special crops *	4	Elective (approved)	20
Grain judging	2		
Farm management	3		
Farm mechanics*	3		
Farm machinery	3		
Elective (approved)	2		
Total	36	Total	35

LOUISIANA STATE UNIVERSITY.

In the following outline six courses have been added to the work of the junior and senior years to meet the major option requirements.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
Composition and literature	6	6	Chemistry (general)	8⅔	10
Algebra	3	3	Physics	7⅓	8
Trigonometry	3	3	Farm crops	2⅔	3
Botany (general)	6⅔	8	Forage crops	2⅔	3
Stock breeding and judging	7⅓	8	Zoology (general)	6⅔	8
Farm machinery	6⅔	8	Horticulture (principles)	5⅓	6
Military science	4	5	Military science	4	5
Total	36⅔	41	Total	37⅓	43
JUNIOR YEAR.			SENIOR YEAR.		
Dairying	4⅓	5	Farm management *	4	4
Feeds and feeding	5⅓	6	Farm crops (advanced)*	3⅓	4
Soil physics	4⅔	5	Forage crops (advanced)*	3⅓	4
Soil fertility *	4	4	Soil physics (advanced)*	4⅔	6
Drainage *	4	5	Elective (approved)	14⅔	18
Farm machinery (power)*	4	5			
Elective (approved)	6⅔	8			
Total	32⅔	38	Total	30	36

UNIVERSITY OF MAINE.

FRESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
Field crops	2	2	Soils	3	3½
Chemistry (general)	9	9	Field crops	3	3
Drawing	2	3	Live stock management	2	2
Types and breeds of live stock	2	2	Live stock judging	1	1
Live stock judging	1	1	Biochemistry	7	7
Botany (general)	4	4	Biology	2	2
Public speaking	2	2	Entomology	4	4
English composition	4	4	Chemistry (organic)	3	3
Modern language	5	5	Pomology	3	3½
Zoology (general)	4	4	Trigonometry	5	5
Physical training (gymnastics)	1½	3	Poultry	5	5
Military art	2	3	Military art	2	3
Total	38½	42	Total	40	42
JUNIOR YEAR.			SENIOR YEAR.		
Field crops	2	2	Soil fertility	2	2
Field crops (judging)	2	2	Root crops	2	2
Forage crops	2	2	Farm management	3	3½
Crop improvement	2	2	Agricultural engineering (general)	6	7
Dairying (general)	4	4	Farm accounts	2	2
Live stock feeding	2	2	Elective (approved)	16½	18
Chemistry (agricultural)	2	2			
Bacteriology	5	5			
Botany (general)	5	5			
Plant physiology and pathology	5	5			
Composition	2	2			
Literary types	2	2			
Electives (approved)	5	5½			
Total	40	40½	Total	31½	34½

MARYLAND STATE COLLEGE OF AGRICULTURE.

[Subjects followed by asterisk (*) not absolutely required.)

FRESHMAN YEAR.	College credits.	Semester-hours. (2-hr. lab. basis.)	SOPHOMORE YEAR.	College credits.	Semester-hours. (2-hr. lab. basis.)
Trigonometry	5	3⅓	Composition	6	4
Rhetoric and composition	15	10	Public speaking	3	2
History (American)*	9	6	Modern language	9	6
Modern language	9	6	Farm crops	3	2
Farm crops	4	2⅔	Soils	8	5⅓
Live stock breeds	3	2	Fertilizers	4	2⅔
Live stock management	5	3⅓	Pomology	6	4
Botany (general)	5	3⅓	Vegetable culture	7	4⅔
Zoology (general)	8	5⅓	Landscape gardening	4	2⅔
Chemistry (general)	10	6⅔	Plant histology	4	2⅔
Drawing (free-hand)	2	1⅓	Plant physiology	7	4⅔
Military instruction	6	4	Entomology	4	2⅔
			Chemistry (inorganic)	5	3⅓
			Chemistry (qualitative)	5	3⅓
			Military instruction	6	4
Total	81	54	Total	81	54

JUNIOR YEAR.	College credits.	Semester-hours. (2-hs. lab. basis.)	SENIOR YEAR.	College credits.	Semester-hours. (2-hr. lab. basis.)
Physics	12	8	English composition	3	2
Composition	5	3⅓	Political economy	12	8
Public speaking	3	2	Genetics (crops)	6	4
Civil government	6	4	Genetics (horticulture)	6	4
Business law	3	2	Soils (advanced)	4	2⅔
Psychology	4	2⅔	Farm management	8	5⅓
Soils (advanced)	2	1⅓	Dairy management	4	2⅔
Grain judging	3	2	Poultry	3	2
Animal nutrition	4	2⅔	Plant anatomy and physiology	3	2
Stock judging	4	2⅔	Animal diseases	5	3⅓
Plant pathology	4	2⅔	Forestry	4	2⅔
Geology	5	3⅓	Chemistry (agricultural)	6	4
Chemistry (organic)	4	2⅔	Farm drainage	2	1⅓
Bacteriology	8	5⅓	Farm machinery	4	2⅔
Surveying	4	2⅔	Farm buildings	3	2
Drawing (mechanical)	2	1⅓	Thesis	2	1⅓
Woodwork	2	1⅓	Military instruction	3	2
Military instruction	3	2			
Total	78	52	Total	78	52

MASSACHUSETTS AGRICULTURAL COLLEGE.

The institution's published outlines are regarded as suggestive only. In the suggested agronomy schedule presented here four nontechnical courses have been added to meet group requirements. Since the preparation of this statement the total requirement for graduation has been increased by 14 term-hours or 9⅓ semester-hours.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	College credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
Chemistry (general)	3	2	Physics	7	4⅔
Chemistry (inorganic agricultural)	3	2	Zoology	3	2
Chemistry (organic agricultural)	3	2	Botany	6	4
Algebra	7	4⅔	English (literature)	6	4
Geometry (solid)	3	2	Economics (agricultural)	5	3⅓
Trigonometry	3	2	Sociology (rural)	3	2
Mensuration	2	1⅓	Soils and fertilizers	5	3⅓
Modern language	9	6	Chemistry (qualitative)	6	4
English literature	9	6	Modern language	9	6
Farm crops	1	⅔	Geology	5	3⅓
Live stock (types)	1	⅔	Physical education	1	[1] (1)
Poultry	1	⅔	Military tactics	2	1⅓
Pomology	1	⅔	Military drill	2	[1] (2)
Public speaking	3	2			
Geology (agricultural)	2	1⅓			
Botany (general)	3	2			
Hygiene	1	⅔			
Gymnastics	1	[1] (1)			
Military tactics	2	1⅓			
Military drill	2	[1] (2)			
Total	60	41	Total	60	41
JUNIOR YEAR.			SENIOR YEAR.		
Field and forage crops	5	3⅓	Soils	5	3⅓
Field crops (advanced)	5	3⅓	Fertilizers	5	3⅓
Chemistry (organic)	16	10⅔	Farm management	5	3⅓
Economics (general)*	5	3⅓	Live stock (feeding)	3	2
English (literature)*	5	3⅓	Cooperation in agriculture*	5	3⅓
History (economic)*	3	2	Elective (free)	27	18
Physical education	1	[1] (1)			
Military science	2	1⅓			
Military drill	2	[1] (2)			
Elective (free)	6	4			
Total	50	34⅓	Total	50	33⅓

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[1] The figures in parentheses are the results of two adjustments—one in changing from term-hours to semester-hours and the other in making allowance for extra laboratory or field work required in the subjects concerned.

MICHIGAN AGRICULTURAL COLLEGE.

FRESHMAN YEAR.	College credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
Live stock, types, breeds	3	2	Bacteriology	6	4
Agriculture (economic history)	2	1⅓	Surveying	3	2
Economics	3	2	Public speaking	6	4
Botany (morphology)	4	2⅔	Dairying	3	2
Botany (systematic)	4	2⅔	Fruit growing	3	2
Botany (physiology)	3	2	Plant propagation	2	1⅓
Chemistry (general)	5	3⅓	Physics	10	6⅔
Chemistry (qualitative)	5	3⅓	Soils	2	1⅓
Chemistry (organic)	5	3⅓	Soil fertility	3	2
Composition	9	6	Forage crops	2	1⅓
Shop work	4	[1] (4)	Zoology (general)	5	3⅓
Cereal crops	3	2	Zoology (physiology)	5	3⅓
Forestry	3	2	Entomology	5	3⅓
Mathematics (agricultural)	4	2⅔	Geology	5	3⅓
Trigonometry (plane)	3	2	Military science	3	[1] (3)
Military science	3	[1] (3)			
Total	63	44⅓	Total	63	43
JUNIOR YEAR.			SENIOR YEAR.		
Live stock (breeds)	3	2	Grain judging	5	3⅓
Live stock (feeding)	5	3⅓	Crop improvement	5	3⅓
Live stock (breeding)	2	1⅓	Special crops	5	3⅓
Farm management	3	2	Soil physics	5	3⅓
Poultry	2	1⅓	Soil fertility	5	3⅓
Elective (limited)	45	30	Soil surveying	5	3⅓
Military science	3	3	Elective (limited)	30	20
Total	63	43	Total	60	40

[1] The figures in parentheses are the results of two adjustments—one in changing from term-hours to semester-hours and the other in making allowance for extra laboratory or field work required in the subjects concerned.

UNIVERSITY OF MINNESOTA.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	University credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester-hours (2-hr. lab. basis).
Botany (general)	3	4	Economics (principles)	3	3
Botany (strcutural)	3	4	Economics (agricultural)*	3	3
Rhetoric	6	6	Argumentation	6	6
Chemistry (general and qualitative)	6	8	Zoology (general)	6	8
Algebra (higher)	3	3	Drawing (mechanical)	3	3
Horticulture (general)	3	3	Physics (general)*	6	6
Live stock (breeds and types)	3	3	Bacteriology	3	4
Dairy husbandry	3	3	Chemistry (agricultural)	3	3
Farm crops	3	3	American Government	3	3
History (industrial)	3	3	Military drill	0	2
Military drill	0	2			
Hygiene and freshman lectures	0	1			
Total	36	43	Total	36	41
JUNIOR YEAR.			SENIOR YEAR.		
Farm crops	3	3½	Farm management	6	6
Farm management	3	3	Genetics	3	3
Entomology (economic)	3	3½	Plant breeding	3	3
Animal nutrition	3	3	Grain judging	3	3
Dairy stock feeding and management	3	3	Farm structures	3	3½
Plant pathology	3	3½	Weeds and seeds	3	4
Veterinary medicine	3	3	Live stock feeding	3	3
Soil physics and management	3	3	Farm machinery*	3	3
Soil fertility	3	3	Elective (free)	9	9½
Farm engineering	3	3			
Elective (free)	6	6½			
Total	36	38	Total	36	38

MISSISSIPPI AGRICULTURAL AND MECHANICAL COLLEGE.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	College credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
Agricultural (general)	5	3⅓	Botany (general)	8	5⅓
Field crops	5	3⅓	Plant diseases	4	2⅔
Soils	5	3⅓	Argumentation	3	2
Farm botany	4	2⅔	Exposition	3	2
Drawing (free-hand)	2	1⅓	English literature	3	2
Drawing (mechanical)	1	⅔	Algebra	6	4
Rhetoric	9	6	Trigonometry	3	2
History	9	6	Live stock (breeds)	5	3⅓
Geometry	10	6⅔	Chemistry (inorganic)	18	12
Shopwork	2	1⅓	Dairying	4	2⅔
Physics	8	5⅓	Zoology	5	3⅓
Geology	3	2	Plant propagation	4	2⅔
Poultry	1	⅔	Farm accounts	2	1⅓
Farm machinery	2	1⅓	Military science	7	4⅔
Veterinary pathology	4	2⅔			
Physical education (gym.)	3	2			
Personal hygiene	1	⅔			
Military science	3	2			
Total	77	51⅓	Total	75	50

JUNIOR YEAR.	College credits.	Semester-hours (2-hr. lab. basis).	SENIOR YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
Soil management (fertility)	6	4	Forestry	3	2
Forage crops	5	3⅓	Civil government	3	2
Geology	4½	3	Entomology	4	2⅔
Live stock feeding	5	3⅓	Bacteriology	4	2⅔
Chemistry (organic)	6½	4⅓	Surveying and drainage	5½	3⅔
Chemistry (agricultural)	6½	4⅓	Farm organization	4	2⅔
Dairying	6	4	Plant breeding*	4	2⅔
Entomology	8	5⅓	Soil fertility*	4	2⅔
Horticulture (general)	4	2⅔	Grasses and legumes*	4	2⅔
Veterinary anatomy and physiology	5	3⅓	Research (thesis)*	7½	5
Farm machinery	5	3⅓	Elective (approved)	21½	14⅓
Economics (rural)	4	2⅔	Military science	3	2
Poultry	4	2⅔			
Military science	3	2			
Total	72½	48⅓	Total	67½	45

UNIVERSITY OF MISSOURI.

To meet the major requirements six courses in farm crops have been included in the following schedule:

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Live stock types	3	Bacteriology	3
Botany (general)	5	Chemistry (qualitative)	5
Chemistry (inorganic)	5	Chemistry (organic)	3
Composition and rhetoric	6	Entomology	3
Horticulture (general)	3	Dairying	3
Physics	5	Farm crops	5
Zoology	5	Geology	3
Military science	2	Elective	5
		Military science	2
Total	34	Total	32

JUNIOR YEAR.	Semester-hours.	SENIOR YEAR.	Semester-hours.
Animal nutrition	3	Grain judging	3
Field-crop improvement *	3	Field-crop management	2
Plant physiology	5	Cereal crops	3
Social science	5	Forage crops	3
Chemistry (agricultural)	3	Crop improvement	3
Soils (physics and fertility)	5	Special problems	3
Elective	7	Elective	10
Total	31	Total	27

MONTANA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS.

FRESHMAN YEAR.	College credits.	Semester-hours. 2 hour lab. basis.	SOPHOMORE YEAR.	College credits.	Semester-hours. 2 hour lab. basis.
English composition	6	6	Composition (exposition)	4	4
Chemistry (general)	8	9	Chemistry (organic)	5	5½
Botany (general)	5	4½	Chemistry (agricultural)	5	5¾
Mathematics	3	3	Forage crops	4	4¼
Dairying	3	3¼	Field crops	4	4½
Physics (agricultural)	5	5½	Horticulture	4	4
Plant propagation	3	3¼	Zoology	3	3¼
Live stock (types)	3	3½	Entomology (economic)	4	4½
Military drill	2	2½	Geology	3	3
			Military drill	2	2½
Total	38	40½	Total	38	41¼
JUNIOR YEAR.			SENIOR YEAR.		
Economics	4	4	Farm management	4	4
Soil physics	5	5½	Soil management	2	2
Soil fertility	3	3	Grain judging	2	2¼
Bacteriology	5	5¾	Surveying	3	3¼
Plant physiology	4	4¾	Farm mechanics	3	3½
Organic evolution	3	3	Farm accounts	2	2
Live stock (breeds)	4	4¼	Animal diseases	4	4
Elective (free)	9	10	Plant pathology	4	4¾
			Genetics	4	4
			Thesis	4	4
			Elective (free)	5	5¼
Total	37	40¼	Total	37	39

UNIVERSITY OF NEBRASKA.

The following outline includes eight courses to meet major option requirements:

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
Botany (elementary)*	6	10	Chemistry (organic)	5	6
Chemistry (inorganic)	6	8	Zoology	6	9
Composition and rhetoric	4	4	Forage crops (management)	3	4
Live stock (breeds)	4	4	Soil physics	4	4
Shopwork	4	6	Fruit growing	2	2
Geology	3	3	English (composition)*	6	4
Dairying	4	5	Military science	2	3
Military science	2	3	Elective	4	5
Total	33	43	Total	32	37
JUNIOR YEAR.			SENIOR YEAR.		
Farm organization	3	3	American government *	6	6
Economics	3	3	Farm machinery and spraying machinery *	3	4
Economics (rural)	2	2	Soil fertility *	4	4
Physics *	6	9	Soil management *	2	2
Cereal crop management *	4	4	Plant pathology *	3	6
Soil chemistry and biology *	4	4	Entomology (economic)*	3	6
Field crop practices *	2	2	Elective (free)	7	9
Elective (free)	8	10			
Total	32	37	Total	28	37

UNIVERSITY OF NEVADA.

The following represents the agronomy-horticulture option:

FRESHMAN YEAR.	University credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester-hours (2-hr. lab. basis).
Composition and rhetoric	6	6	Chemistry (organic)	2	2
Zoology	4	4½	Chemistry (quantitative)	2	2½
Botany (general)	4	4½	Chemistry (agricultural)	8	9
Agriculture (general)	3	3	Live-stock judging	4	4½
Live-stock breeds	3	3	Live-stock feeding	3	3
Chemistry (inorganic)	4	4½	Forage crops	4	4¼
Chemistry (qualitative)	4	4½	Dairying	3	3¼
Shopwork	2	2½	Physics	4	4¼
Elective (free)	6	6½	Elective (free)	6	6½
Military science	2	2	Military science	2	2
Total	38	41	Total	38	41¼
JUNIOR YEAR.			**SENIOR YEAR.**		
Surveying	4	4½	Farm management	5	5½
Rural hygiene	4	4¼	Irrigation	5	5½
Farm structures	4	4½	Teaching agriculture	3	3
Farm machinery	3	3	Veterinary pathology	3	3
Cereals	4	4½	Plant physiology	3	3¼
Botany (taxonomy)	3	3	Plant breeding	3	3
Horticulture (general)	3	3¼	Electives (free)	14	15½
Zoology (economic)	3	3¼			
Elective (free)	8	8¾			
Total	36	39	Total	36	38¾

NEW HAMPSHIRE COLLEGE.

The following represents the required work for the horticultural option:

FRESHMAN YEAR.	College credits.	Semester-hours (2-hr. lab. basis.)	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
History of agriculture	1	1	Farm poultry	3	3
Chemistry (inorganic)	6	6	Principles of forestry	3	3¼
English composition	6	6	Economic entomology	3	3¼
Algebra and trigonometry	4	4	Agricultural engineering	3	3¼
Zoology	6	6¼	Live stock (breeds)	3	3
Drawing	2	2¾	Chemistry (qualitative)	5	6¼
Surveying	2	2	Dairying	3	3¼
Botany	6	7	Vegetable gardening	2	3¼
Military science	4	4	Pomology	3	3¼
			Physics	4	4
			Military science	4	4
Total	37	39	Total	36	39¾
JUNIOR YEAR.			**SENIOR YEAR.**		
Field crops	3	3¼	Farm management	3	3¼
Soils	3	3¼	Fertilizers	3	3
Plant physiology	3	3½	Economics	3	3
Greenhouse construction and management	3	3¼	Economics (agricultural)	3	3
Geology	3	3	Evolution of plants	2	2
Landscape gardening	3	3¼	Meteorology	2	2
Nursery management	3	3¼	Plant pathology	3	3¼
Floriculture	2	2¼	Pomology	4	4¼
Vegetable forcing	3	3½	Horticulture seminar	1	1¼
Bacteriology	3	3	Elective (approved)	11	12
Shopwork	3	3½			
Elective (approved)	4	4			
Total	36	39	Total	35	37½

RUTGERS COLLEGE.

The following represents the required work for the soil fertility option·

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR	College credits.	Semester-hours (2-hr. lab. basis.)	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
Rhetoric and composition	2	2	American literature	2	2
English literature	4	4	English literature	2	2
Algebra	3	3	Modern language	6	6
Geometry	5	5	Physics	6	7
Trigonometry	2	2	Chemistry (qualitative)	4	4½
Chemistry (general)	6	7	Soils	3	3½
Modern language	8	8	Farm crops	3	3½
Drawing	4	5	Dairying	2	2½
Hygiene	1	1	Poultry	2	2½
Military science	2	3	Plant physiology	3	3½
			Botany (general)	3	3½
			Military science	2	3
Total	37	40	Total	38	43½
JUNIOR YEAR.			SENIOR YEAR.		
History *	6	6	Economics *	4	4
Fertilizers	2	2	Constitutional law	4	4
Chemistry (quantitative)	4	5	Soil fertility	12	14
Plant propagation	3	3½	Soil microbiology	6	7
Bacteriology	3	3½	Geology (rocks and soils)	6	7
Zoology	5	6	Thesis	4	5
Entomology	3	3½			
Plant pathology	2	2½			
Live-stock types	3	3½			
Pomology	4	4½			
Total	35	40	Total	36	41

NEW MEXICO COLLEGE OF AGRICULTURE AND MECHANICAL ARTS.

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Rhetoric and composition	6	Chemistry (organic)	2
Chemistry (general)	9	Chemistry (agricultural)	5
Botany (general)	7	Dairying	3½
Live stock (types)	5½	Cereals	3
Farm motors	3½	Forest crops	3
Physics (agricultural)	3	Bacteriology	3½
Agronomy (elementary)	2	Zoology (general)	3½
Plant propagation	2½	Physiology (human)	4
Military science	3	Surveying	4
		Farm machinery	2½
		Vegetable gardening	3
		Landscape gardening and floriculture	2
		Military science	3
Total	41½	Total	42
JUNIOR YEAR.		SENIOR YEAR.	
Soil physics	3½	Geology	4
Soil fertility	3½	Farm management	6
Fruit growing	3	Sociology	2
Stock feeding	3	Economics	3
Entomology (general)	3	Thesis	5
Entomology (economic)	2½	Plant breeding	3
Veterinary science	3	Agronomy (experimental)	1½
Irrigation	3	Agronomy (seminar)	2
Grain judging	1½	Elective (limited)	6
Seeds	1		
Plant pathology	3½		
Plant histology	3½		
Total	34	Total	32½

CORNELL UNIVERSITY.

The following table shows the distribution of the required work in the four-year agricultural curriculum:

FRESHMAN YEAR.		SOPHOMORE YEAR.		JUNIOR YEAR.		SENIOR YEAR.
	Hours.		*Hours.*		*Hours.*	
English	8	Geology	3	Political science	6	
Chemistry	6	Physics	5			
Biology	3	Physiology	3			
Zoology	6	Chemistry, mathematics, or bacteriology	5			
Botany	6	Drill.				
Natural history of the farm	1					
Drill.						

The following outline includes the above-required work and, in addition, a selected list of elective courses recommended for students specializing in farm crops:

[Subjects followed by asterisk (*) not absolutely required.]

SOPHOMORE YEAR.	University credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR	University credits.	Semester-hours (2-hr. lab. basis).
English	8	8	Geology	3	3¼
Chemistry (inorganic)	6	6½	Chemistry (agricultural)	4	4
Chemistry (qualitative and quantitative)	5	6½	Botany (general)	6	6½
Biology (general)	6	6½	Plant physiology	4	4½
Physics	5	5	Economics	6	6
The farm (agricultural environment)	2	2¼	Meteorology	3	3¼
Military science	0	3	Pomology	3	3¼
			Military drill	0	3
Total	32	37¾	Total	29	33¾
JUNIOR YEAR.			SENIOR YEAR.		
Farm crops*	4	4¼	Farm crops (advanced)*	3	3
Special crops*	3	3¼	Genetics*	3	3
Soil management*	3	3¼	Farm management*	4	4½
Vegetable gardening*	2	2¼	Soil technology*	3	3½
Bacteriology*	4	5½	Plant breeding*	4	4¼
Plant pathology*	3	4½	Rural economy*	3	3
Farm management*	2	2¼	Animal husbandry*	5	5½
Botany*	2	2½	Entomology (general)*	3	3¼
Rural engineering*	6	6¾	Plant pathology*	3	3½
Total	29	34½	Total	31	33½

H CAROLINA COLLEGE OF AGRICULTURE AND ENGINEERING.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
(general)	6	Farm equipment	2
ry (inorganic)	6	Dairying	3
:	2	Botany (general)	5
rking	2	Chemistry (qualitative)	6
tion and rhetoric	3	Rhetoric	3
n literature	3	Public speaking	3
	5	Geology	2
y	5	Plant propagation	3
(general)	6	Physics (agricultural)	6
drill	4	Veterinary anatomy and physiology	5
		Zoology (general)	2
		Military drill	4
tal	42	Total	44

JUNIOR YEAR.		SENIOR YEAR.	
ops	6	Farm crops	12
ck (breeds)	3	Farm management	3
ck (feeding)	3	Animal breeding	3
ry (quantitative)	2	Plant breeding	3
ry (agricultural)	2	Chemistry (organic)	6
literature	6	Economics (agricultural)	6
y	6	Soil fertility	3
le gardening	3	Drainage	3
	3	Entomology (economic)	3
	6	Elective (free)	6
language*	4		
ics*	4		
tal	48	Total	48

NORTH DAKOTA AGRICULTURAL COLLEGE.

RESHMAN YEAR.	College credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
ines	3	2	Dairying (elements)	3	2
ition	4	2⅔	Animal husbandry (feeds and feeding)	3	2
ntation	4	2⅔	Veterinary science (general)	14	9⅓
ry (general)	5	3⅓	Farm crops	5	3⅓
ry (inorganic)	4	2⅔	Chemistry (quantitative)	5	3⅓
ry (qualitative)	6	4	Soil physics	5	3⅓
live stock	4	2⅔	Soil management (fertility)	5	3⅓
of live stock	10	6⅔	Zoology (general)	9	6
(general)	13	8⅔	Chemistry (organic)	9	6
practice	1	⅔	Hoticulture (general)	4	2⅔
ropagation	4	2⅔	Plane trigonometry	2	1⅓
ops	3	2	Surveying	2	1⅓
drill	6	4	Military drill	6	4
otal	67	44⅔	Total	72	48

JUNIOR YEAR.			SENIOR YEAR.		
hysiology	4	2⅔	Entomology	4	2⅔
athology	4	2⅔	Bacteriology (general)	4	2⅔
(elementary)	10	6⅔	Soil biology	5	3⅓
s (general)	5	3⅓	Farm management	5	3⅓
l economy	4	2⅔	Methods of investment	4	2⅔
onomics	4	2⅔	Thesis	6	4
ility	8	5⅓	Genetics (general)	5	3⅓
literature	4	2⅔	Elective (free)	10	6⅔
otal	43	28⅔	Total	43	28⅔

OHIO STATE UNIVERSITY.

The following outline shows a tentative schedule for a student specializing in farm crops. Selected courses are included in the sophomore, junior, and senior years to meet the prescribed electives and in the last two years to satisfy the major requirements.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	University credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester-hours (2-hr. lab basis).
Chemistry (general)	8	10	Chemistry (agricultural)	5	6
Zoology (general)	6	6	Botany (general)	8	9
English composition	4	4	Soils (elementary)	5	6
Mathematics	3	3	Field crops (production)*	4	4
Drawing (mechanical)	2	2½	Entomology (economic)*	3	3
Shopwork	4	5	Geology (glacial)*	3	3
Physics	3	3	Military drill	2	2
Geology	3	3	Elective (free)	6	7
Survey of agriculture	1	1			
Physical education (gymnastic)	2	2			
Hygiene	0	1			
Military drill	2	2			
Total	38	42½	Total	36	40
JUNIOR YEAR.			SENIOR YEAR.		
Economics	6	6	Horticulture (farm)*	4	4
Farm engineering*	4	4	Farm management*	4	4
Live stock (types)*	4	4	Crop production (advanced)*	6	7
Dairying*	4	4	Seminar (farm practice)	2	2
Entomology (economic)*	3	3	Elective (free)	10	11
Cereal crops	2	2	Elective (limited)	8	9
Forage crops	2	2			
Field crop improvement	3	4			
Seminar (farm practice)	2	2			
Elective (free)	4	4½			
Total	34	35½	Total	34	37

OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE.

FRESHMAN YEAR.	College credits.	Semester-hours (2 hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
Composition	6	6	News writing (English)	2	2
Chemistry (inorganic)	7⅔	9	Chemistry (qualitative)	2	2½
Botany (general)	6⅔	8	Chemistry (quantitative)	4	5
Farm mechanics	2⅓	3	Chemistry (organic)	3	3½
Dairying	3⅔	3	Fruit growing	2⅔	3
Live stock (types)	3	3½	Live stock (breeds)	3⅓	4
Vegetable gardening	2⅔	3	Cereal crops	3⅓	4
Public speaking	1⅔	2	Forage crops	2⅔	3
Physical training	2	3	Plant physiology	2⅔	3
Military science	2	3	Bacteriology	3⅓	4
			Zoology (general)	3⅓	4
			Military science	2	3
Total	37⅔	43½	Total	34⅓	41
JUNIOR YEAR.			SENIOR YEAR.		
Farm motors	3⅓	4	Farm crops (advanced)	3⅓	4
Farm structures	2⅓	3	Farm management	3⅓	4
Cotton production	2⅔	3	Farm accounts	1⅔	2
Genetics	2	2	Crop improvement	2⅓	3
Plant breeding	2	2	Seminar	2	2
Soils	3⅓	4	Agriculture (general)	3	3½
Soil fertility	5	6	Agricultural education	2	2
Entomology	3⅔	4	Thesis	4	4
Animal nutrition	3	3	Elective (free)	9	11
Poultry	2	2			
Basic organization	3	3			
Total	32⅓	36	Total	30⅔	5½3

OREGON AGRICULTURAL COLLEGE.

FRESHMAN YEAR.	College credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis).
English prose	6	6	Farm accounts	2	2
Chemistry (general)	6	8	Economic zoology	6	7
Physics (general)	3	4	Agricultural chemistry	6	8
Botany (agricultural)	6	7½	Bacteriology	3	3
Crop production	3	3½	Fruit growing	2	3
Stock judging	2	3	Landscape gardening	1½	1½
Stock management	3	3	Vegetable growing	1½	1½
Farm surveying	2	2	Soils	6	8
Library practice	½	¾	Dairying (elements)	3	3
Hygiene	½	½	Poultry keeping	2	2
Physical education	1	2	Physical education	1	2
Military drill	2	4	Military drill	2	4
Total	35	44¼	Total	36	45
JUNIOR YEAR.			SENIOR YEAR.		
Agricultural economics	3	3	National government	3	3
Plant chemistry	2	2	State and municipal government	3	3
Agricultural bacteriology	3	3	Agrostology	3	3
Plant pathology	2	3	Forage crops	2	2
Diseases of field crops	1	1	Soil fertility	3	3
Entomology	2	3	Farm management	3	3
Cereal crops	4	5	Crop breeding	2	2
Land drainage	3	3½	Crop work	2	2
Crop improvement	3	3½	Feeds and feeding	3	3
Soil physics	4	5	Potato growing	1	1
Military drill	2	4	Elective (approved)	6	7
Military science	2	2			
Elective (free)	3	3			
Total	34	41	Total	31	32

PENNSYLVANIA STATE COLLEGE.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	College credits.	Semester-hours (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours (2-hr. lab. basis)
Botany (general)	9	9	Bacteriology (agricultural)	3	3
Live stock (breeds)	3	3	Chemistry (organic)	2	2
Modern language	6	6	Chemistry (qualitative)	2½	3
Algebra	2	2	Chemistry (agricultural)	5	5
Trigonometry (plane)	3	3	Soils	4	4
Composition	3	3	Genetics (general)	2	2
Argumentation	3	3	Modern language	6	6
Chemistry (general)	6	6½	Geology	3	3½
Dairying	2	2	Plant propagation	3	3
Military drill	1	2½	Composition	6	6
Military tactics	1	1	Physics	3	3½
Gymnasium drill	1	1	Military drill	1	2½
			Gymnasium drill	1	1
Total	40	42	Total	41½	44½
JUNIOR YEAR.			SENIOR YEAR.		
Farm crops	6	6	Farm management	6	6
Soils	4	5	Crop production	3	3
Soil fertility	3	3	Seminar	2	2
Farm machinery	3	3½	Farm structures	3	3
History (American economic),	6	6	Stock judging*	2	2
Chemistry (agricultural)*	5	6	Vegetable gardening*	3	3
Zoology (general)	3½	3½	Dairy cattle*	4	4
Entomology (general)	4	4½	Economics	6	6
Plant breeding	2	2	Elective (free)	7	8
Farm practice (seminar)	6	6			
Total	42½	45½	Total	36	37

UNIVERSITY OF PORTO RICO.

The following represents the required work of the curriculum in general agriculture:

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
English composition	6	Entomology	4
Animal husbandry	6	Botany	6
Agronomy	6	Breeds of animals	3
Elementary horticulture	6	Animal breeding	3
Pedagogy *	6	Field crops	6
Farm mechanics	6	Agricultural chemistry	8
Entomology (general)	4	Horticulture	6
Military science	3	Soils	4
		Military science	3
Total	43	Total	43
JUNIOR YEAR.		SENIOR YEAR.	
Farm machinery	6	Vegetable pathology	2
Tropical crops	6	Tropical crops	18
Horticulture	8	Bacteriology	4
Animal feeding	3	Thesis	3
Live stock judging	3	Elective	13
Farm management	3	Military science	3
Political economy	3		
Commercial law	3		
Elective	3		
Military science	3		
Total	41	Total	43

RHODE ISLAND STATE COLLEGE.

The following represents the work required for the animal husbandry option:

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Rhetoric and composition	6	Newspaper work	1
Modern language *	6	Argumentation	2
Algebra	2½	Public speaking	1
Trigonometry	2½	Modern language *	6
Chemistry (general)	8	Chemistry (organic)	4
Botany (general)	6	Chemistry (agricultural)	4
Plant propagation	2	Physics	5
Drawing (freehand)	1	Botany (agricultural)	3
How to study	½	Zoology (general)	8
Live stock (breeds)	4	Surveying	3
Spraying and pruning	2	Geology	2
Vegetable gardening	2	Forage crops	2
Military drill	2	Military drill	2
Military tactics	1	Military tactics	1
Total	45½	Total	44
JUNIOR YEAR.		SENIOR YEAR.	
Modern essays	4	Political economy	2⅔
Debating	2	Civil government	2⅔
History (industrial)	4	Shakespeare	2⅔
Veterinary practice	3	Public speaking	2
Poultry	1	Agricultural experimentation	3
Soils and fertilizers	5½	Plant breeding	3
Farm crops	4	Bacteriology	6
Farm management	2	Stock feeding	3
Fruit culture	2	Stock breeding	3
Landscape gardening	3	Elective (free)	16
Dairying	3	Military drill	2
Farm machinery	3	Military tactics	1
Elective (free)	3		
Military drill	2		
Military tactics	1		
Total	42½	Total	47

CLEMSON COLLEGE.

FRESHMAN YEAR.	College credits.	Term-hours.	Semester hours.	SOPHOMORE YEAR.	College credits.	Term-hours.	Semester hours.
Geometry	10	10	6⅔	Trigonometry	5	5	3⅓
Algebra	5	5	3⅓	Composition and rhetoric	6	6	4
Composition and rhetoric	15	15	10	American literature	·3	3	2
History	9	9	6	Physics	13	11	7⅓
Agriculture (general)	6	6	4	Chemistry (general)	16	12½	8⅓
Shopwork	12	6	4	Surveying	6	4½	3
Drawing	12	6	4	Zoology	11	7	4⅔
Botany (general)	8	4	2⅔	Entomology	5	4	2⅔
Bookkeeping	4	2	1⅓	Plant pathology	5	3	2
Military drill	9	4½	3	Plant physiology	5	3	2
				Farm machinery	4	3	2
				Geology	2	1	⅔
				Military drill	9	4½	3
Total	90	67½	45	Total	90	67½	45
JUNIOR YEAR.				SENIOR YEAR.			
English literature	6	6	4	English literature	6	6	4
History (American)	6	6	4	Economics	6	6	4
Chemistry (organic)	4	4	2⅔	Geology	6	6	4
Chemistry (agricultural)	2	2	1⅓	Bacteriology	6	4	2⅔
Chemistry (quantitative)	9	4½	3	Common crops	4	3	2
Soils	8	6	4	Small grains	4	3	2
Forage crops	2	2	1⅓	Cotton	4	3	2
Cotton grading	2	1	⅔	Plant breeding	2	2	1⅓
				Farm motors	5	3	2
Veterinary anatomy and physiology	10	8	5⅓	Drainage	4	3	2
Pomology	4	3	2	Farm management	9	7	4⅔
Vegetable gardening	4	3	2	Truck farming	4	3	2
Entomology	2	1	⅔	Pomology	4	3	2
Live stock (breeds)	7	5½	3⅔	Animal feeding	4	3	2
Dairying	10	7	4⅔	Botany (taxinomic)	5	3	2
Forestry	2	1	⅔	Entomology (economic)	2	2	1⅓
Military tactics	3	3	2	Plant diseases	2	1	⅔
Military drill	9	4½	3	Poultry	2	1	⅔
				Teaching agriculture	2	1	⅔
				Military drill	9	4½	3
Total	90	67½	45	Total	90	67½	45

SOUTH DAKOTA STATE COLLEGE.

FRESHMAN YEAR.	College credits.	Semester-hours. 2 hour lab. basis.	SOPHOMORE YEAR.	College credits.	Semester-hours. 2 hour lab. basis.
Rhetoric	6	6	Botany (general)	8	10
Chemistry (elementary)	8	15	Chemistry (qualitative)	3	4
Farm crops	4	5	Chemistry (organic)	4	3½
Stock judging	3	4	Veterinary anatomy	2	2
Farm dairying	3	3	Extempore speaking	2	2
Breeds of live stock	3	3	Entomology	5	10
Modern language	8	8	Horticulture (general)	2	2
Military tactics	2	3	Modern language	8	8
			Military science	1	1
			Military tactics	2	3
Total	37	47	Total	37	45½
JUNIOR YEAR.			SENIOR YEAR.		
Zoology (general)	8	10	Economics	3	3
Soils	4	6	Rural economics	3	3
Soil fertility	4	6	Heredity	3	3
Farm crops	4	5	Geology (agricultural)	5	5
Psychology	3	3	Elective (free)	20	24
English literature	6	6			
Elective (free)	9	11			
Total	38	47	Total	34	38

UNIVERSITY OF TENNESSEE.

The following outline includes, in addition to the prescribed work, four courses to meet major requirements:

[Subject followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Rhetoric and composition	3	Modern language	6
American literature	3	Chemistry (inorganic)	3
Mathematics	6	Chemistry (qualitative)	3
Modern language	6	Botany (agricultural)	3
Botany (general)	6	Heredity	3
Zoology (general)	6	Live stock (breeds)	3
Farm study (practice)	2	Live stock (management)	2
Military drill	5	Pomology	3
		Dairying	3
		Soil fertility	3
		Military drill	5
Total	37	Total	37
JUNIOR YEAR.		SENIOR YEAR.	
English literature	6	Animal breeding	3
Chemistry (quantitative)	3	Plant pathology	3
Chemistry (organic)	3	Economics	3
Geology	3	Economics (agricultural)	3
Bacteriology	3	Farm crops (advanced) *	6
Veterinary anatomy	3	Soil fertility *	6
Animal diseases	3	Plant breeding *	3
Forage and fiber crops	3	Economic entomology *	3
Cereal crops	3		
Animal nutrition	3		
Stock judging	3		
Total	36	Total	30

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS.

[Subject followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Crop production	3	Live stock (breeds)	3
Live stock (types)	4	Poultry	2
Botany (general)	8	Zoology	6
Chemistry (inorganic)	8	Chemistry (organic)	4
Rhetoric and composition	6	Geology	3
Dairying	3	English literature	6
Physics	6	Horticulture (general)	4
Military science	2	Vegetable gardening	3
Military drill	2	Veterinary practice	6
		Military drill	2
		Military science	2
Total	42	Total	41
JUNIOR YEAR.		SENIOR YEAR.	
Soils	5	Economics	3
Farm crops	5	Economics (rural)	3
Chemistry (analytical)	3	Public speaking	2
Chemistry (agricultural)	3	Plant breeding	4
Argumentation	2	Soils (advanced)	3
Farm machinery *	3	Soil fertility	3
Drainage	3	Marketing	4
Surveying	5	Animal nutrition	4
Soil mapping *	3	Farm management	5
Entomology (systematic)	3	Farm management (advanced) *	3
Entomology (economic)	3	Cost accounting *	3
Military drill	2	Military drill	2
Total	40	Total	39

AGRICULTURAL COLLEGE OF UTAH.

are required to complete the work of the following groups: Major subject, ninor subject, 12 hours; biological science, 12 hours; exact science, 24 nage (English or foreign), 16 hours; social science, 12 hours; military science, ee electives, 28 hours. The following outline has been prepared to meet rements and represents the work of a student specializing in agronomy.

MAN YEAR.	College credits.	Semester-hours. (2-hr. lab. basis).	SOPHOMORE YEAR.	College credits.	Semester-hours. (2-hr. lab. basis.)
....	4	4	Modern language........................	6	6
age........................	6	6	Chemistry (organic)........................	3	3
organic)........................	10	12	Geology (economic)........................	3	3
....	3	3½	Botany (general)........................	8	9
....	3	3½	Soils........................	6	6½
....	2	3	Military drill........................	2	3
ce........................	2	2	Military science........................	2	2
)........................	4	4½	Elective (free)........................	4	4½
....	34	38	Total........................	34	37
OR YEAR.			SENIOR YEAR.		
....	6	6	Economics........................	6	6
....	8	8	Seminar........................	2	2½
....	4	4½	Soil bacteriology........................	3	3½
ative)........................	2	2½	Economic entomology........................	3	3
airying........................	3	3½	Plant pathology........................	3	3½
....	2	3	Elective (free)........................	13	15
ce........................	2	2			
)........................	7	8½			
....	34	37½	Total........................	30	33½

UNIVERSITY OF VERMONT.

wing represents the work required for the curriculum in animal industry.

[Subjects followed by asterisk (*) not absolutely required.]

SHMAN YEAR.	Semester hours.	SOPHOMORE YEAR.	Semester hours.
....	4	Botany (general)........................	8
ometry........................	4	Zoology (agricultural)........................	6
neral)........................	10	English literature........................	4
composition........................	4	Soils........................	6
age........................	6	Stock feeding........................	3
....	2	Live stock (breeds)........................	2
ral)........................	4	Olericulture........................	3
surveying........................	2	Forestry........................	2
ing (gymnastics)........................	1	Physical training (gymnastics)........................	1
ce........................	4	Military science........................	4
....	41	Total........................	39
NIOR YEAR.		SENIOR YEAR.	
lomestic animals........................	2	Milk production........................	3
tc., of domestic animals........................	4	Diseases of domestic animals........................	3
....	3	Poultry husbandry........................	6
ment........................	3	Farm management........................	3
....	3	Farm mechanics........................	3
....	3	Pomology........................	3
ctures........................	3	Rural economics........................	3
....	3	Forging........................	3
ical engineering........................	3	Agricultural chemistry*........................	3
g........................	3	Commercial law*........................	3
n........................	3	Economics*........................	3
ture........................	3		
....	36	Total........................	36

VIRGINIA POLYTECHNIC INSTITUTE.

The following represents the work required for the curriculum in general agriculture.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	College credits (hours per week).	Semester-hours.	SOPHOMORE YEAR.	College credits.	Semester-hours.
Rhetoric	9	6	Rhetoric	9	6
Modern language	9	6	Modern language	9	6
Algebra	6	4	Drainage	3	2
Geometry	6	4	Farm machinery	3	2
Trigonometry	6	4	Cost accounting	3	2
Physics	9	6	Orchard technique	7½	2½
Physics laboratory	7½	2½	Chemistry (inorganic)	9	6
Chemistry (inorganic)	9	6	Qualitative analysis	7½	2½
Chemistry laboratory	7½	2½	Surveying	3	2
Drawing (mechanical)	7½	2½	Surveying (practical)	6	2
Drawing (freehand)	7½	2½	Live stock (breeds)	6	4
Shopwork	15	5	Live stock judging	9	3
Military training	18	6	Veterinary anatomy, etc	6	4
			Horticulture (principal)	3	2
			Botany (structural)	6	2
			Botany (systematic)	6	2
			Farm buildings	3	1
			Military training	18	6
Total	117	57	Total	117	57
JUNIOR YEAR.			SENIOR YEAR.		
English literature	9	6	Economics	6	4
Modern language	9	6	Farm management	3	2
Chemistry (organic)	9	6	Chemistry (agricultural)	9	6
Plant pathology	6	4	Geology (general)*	6	4
Farm crops	3	2	Geology laboratory*	3	1
Farm crops laboratory	9	3	Vegetable physiology	3	2
Animal parasites	3	2	Genetics	6	4
Zoology	6	4	Bacteriology (general)	3	2
Animal breeding	6	4	Bacteriology (laboratory)	15	5
Soil physics	3	2	Animal nutrition	6	4
Soil physics laboratory	6	2	Live stock management	3	2
Quantitative analysis	9	3	Animal diseases	9	6
Entomology	9	3	Veterinary clinic	9	3
Plant histology	6	2	Dairy technology	6	2
Dairy products (testing)	6	2	Butter making	6	2
Military training	18	6	Cheese making	6	2
			Military training	18	6
Total	117	57	Total	117	57

STATE COLLEGE OF WASHINGTON.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester-hours.	SOPHOMORE YEAR.	Semester-hours.
Field crops	5	Fruit growing	2
Live stock (types)	5	Soil physics	4
Rhetoric and composition	3	Soil fertility	3
English literature	3	Farm machinery	4
Chemistry (inorganic)	5	Chemistry (organic)	5
Chemistry (qualitative)	5	Bacteriology	5
Physics	6	Dairying	3
Zoology	2	Botany (general)	5
Geology	2	Plant pathology	3
Library practice	½	Rhetoric and composition	4
Military drill	2	Physical culture	1
Physical culture	1	Military drill	2
Total	39½	Total	41
JUNIOR YEAR.		**SENIOR YEAR.**	
Modern language	10	Modern language	10
Cereal crops	3	Economics	5
Principles of feeding	3	Farm management	3
Principles of breeding (plant or animal)	2	Elective (limited)	7
Poultry husbandry	3	Elective (free)	11½
Rural economics*	5		
Elective (limited)	9		
Elective (free)	2		
Total	37	Total	36½

WEST VIRGINIA UNIVERSITY.

In addition to the prescribed work, several courses that have been suggested by the major department have been included in the schedule for the junior and senior years.

FRESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
Chemistry (organic)	8	9	Zoology	4	4½
Botany (general)	8	9	Physics	8	8
Live stock (breeds)	3	3½	Live stock (management)	3	3
Vegetable gardening	3	3½	Dairying	3	3½
Farm management (elementary)	1	1	Poultry	3	3½
Agriculture (general)	1	1	Pomology	3	3½
Rhetoric and composition	6	6	Farm crops	4	4½
English literature	4	4	Soil fertility	4	5
Military science	2	4	Entomology	4	4½
			Military science	2	4
Total	36	41	Total	38	44
JUNIOR YEAR.			**SENIOR YEAR.**		
Economics	3	3	Sociology	4	4
Bacteriology	3	3½	Farm management	3	3
Chemistry (organic)	3	3½	Plant breeding*	3	3
Farm management	3	3	Seminar	2	2
History (economic)	3	3	Soil chemistry*	3	3½
Forage crops*	3	3½	Soil bacteriology*	3	3½
Plant physiology*	6	7	Farm machinery*	2	3
Entomology (economic)*	3	3½	Elective	14	16
Grain growing*	3	3½			
Soil fertility*	2	2			
Elective (free)	4	4½			
Total	36	40	Total	34	38

UNIVERSITY OF WISCONSIN.

The following outline represents the required work for students entering the u versity without modern language. A separate schedule is offered for those w present modern language upon admission. In addition to the generally prescrib work the schedule presented here includes eight courses to meet the major and mi requirements in the senior year.

[Subjects followed by asterisk (*) not absolutely required.]

FRESHMAN YEAR.	Semester hours.	SOPHOMORE YEAR.	Semes hour
English composition	6	Chemistry (quantitative)	
Modern language	8	Chemistry (organic)	
Chemistry (general)	10	Chemistry (agricultural)	
Cereals	2½	Bacteriology (agricultural)	
Agricultural engineering	2½	Botany (general)	
Stock judging	2½	Fruit growing	
Dairying	2½	Mathematics	
Physical education (gymnastics)	2	Soils (physics and fertility)	
Military drill	2	Zoology (general)	
		Physical education (gymnastics)	
		Military drill	
Total	38	Total	
JUNIOR YEAR.		SENIOR YEAR.	
Botany (economic)	2	Major:	
Plant physiology	4	Plant breeding*	
Live stock management	2	Grasses*	
Economics (agricultural)	5	Cereals*	
Physics	6	Agronomy (problems)*	
Elective (limited)	10	Minor:	
Elective (free)	5	Land drainage*	
		Soil management*	
		Plant nutrition*	
		Field management*	
		Elective (limited)	
		Elective (free)	
Total	34	Total	

UNIVERSITY OF WYOMING.

following outline shows the distribution of the work of the agronomy and general ture curriculum. In the junior year three selected agricultural courses have ncluded to satisfy the limited elective work.

[Subjects followed by asterisk (*) not absolutely required.]

ESHMAN YEAR.	University credits.	Semester hours (2-hr. lab. basis).	SOPHOMORE YEAR.	University credits.	Semester hours (2-hr. lab. basis).
ition	6	6	Chemistry (inorganic)	8	10
(general)	10	10	Surveying	2	3
rops	3	4	Irrigation	2	3
rops	3	4	Farm machinery	4	6
	5	5	Live stock (breeds)	6	6
metry	5	5	Bacteriology	4	5
drill	1	3	Animal diseases	3	3
			Elective (free)	2	2
			Military drill	1	3
al	33	37	Total	32	41
JUNIOR YEAR.			SENIOR YEAR.		
ry (qualitative)	3	4	Chemistry (organic)	5	5
ry (quantitative)	3	4	Chemistry (agricultural)	4	5
	3	4	Farm management	2	2
ility	3	4	Plant breeding	2	2
le gardening*	2	2	Plant histology	3	3½
feeding*	5	5	Elective (approved)	14	16½
seases*	3	3½			
(approved)	8	9½			
drill	1	3			
al	31	39	Total	30	34

○

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 30

RESOURCES AND STANDARDS *of* COLLEGES OF ARTS AND SCIENCES

REPORT OF A COMMITTEE
REPRESENTING THE ASSOCIATIONS OF
HIGHER EDUCATIONAL INSTITUTIONS

Prepared by

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SECRETARY

WASHINGTON
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itution's funds 77

LETTER OF TRANSMITTAL.

Department of the Interior,
Bureau of Education,
Washington, August 17, 1918.

Sir: An accurate and comprehensive study of college standards and resources has been needed for many years. Such a study should help college officers in one part of the country to evaluate credentials presented by students from institutions in other parts. It should assist parents to select wisely the institutions to which they shall send their children. Above all, it should enable college authorities to compare their own institutions with others and to strive for the most necessary improvements. In 1915, the Bureau of Education secured the cooperation of a committee representing higher educational associations for the purpose of making such a study. The results are presented in the accompanying document, which has been prepared by Dr. S. P. Capen, specialist in higher education in this bureau, who acted as secretary of the committee. They are less complete than could be desired, but nevertheless I believe they will accomplish, in a measure, the object in view.

The war is likely to bring about considerable changes in colleges and universities. The effects of it on the financial status and academic policies of many institutions are already marked. As a record of the condition of a majority of the higher institutions of the country in the period immediately preceding the entry of the United States into the war, in a period which may prove to be the end of an epoch in higher education, the accompanying study is especially timely. I therefore recommend it for publication as a bulletin of the Bureau of Education.

Respectfully submitted.

P. P. Claxton,
Commissioner.

The Secretary of the Interior.

RESOURCES AND STANDARDS OF COLLEGES OF ARTS AND SCIENCES.

REPORT OF THE COMMITTEE ON HIGHER EDUCATIONAL STATISTICS.

During the year 1914–15 the Bureau of Education organized a committee made up of representatives of the principal associations dealing with higher education for the purpose of discussing the advisability of classifying colleges and universities on a national scale and, if such classification seemed desirable, suggesting methods of procedure. The members of the committee, and the association represented by each, follow:

Prof. Walter Ballou Jacobs, *New England Association of Colleges and Secondary Schools.*
Commissioner John H. Finley, *Association of Colleges and Preparatory Schools of the Middle States and Maryland.*
Prof. Bert E. Young, *Association of Colleges and Secondary Schools of the Southern States.*
Prof. H. A. Hollister, *North Central Association of Colleges and Secondary Schools.*
Dean R. D. Salisbury, *Association of American Universities.*
Chancellor Samuel Avery, *National Association of State Universities.*
Dr. N. P. Colwell, *American Medical Association.*
President Charles S. Howe, *Society for the Promotion of Engineering Education.*
President D. J. Cowling, *Association of American Colleges.*
The Commissioner of Education.
Dr. S. P. Capen, *specialist in higher education, Bureau of Education (secretary).*

Several other associations were asked to furnish representatives for this committee but declined.

The committee met at the Bureau of Education, May 3, 1915, and organized itself as a permanent committee on higher educational statistics to cooperate with the Bureau of Education in the study of the standards of higher educational institutions.

A CRITICAL STUDY OF COLLEGE AND UNIVERSITY RESOURCES.

The committee considered the attempts of the Bureau of Education in 1911 and 1912 to classify the colleges of the country with relation to the value of the bachelor's degree. It concluded that the continuance of the classification on this basis was at the present time, and in view of the resources of the Bureau of Education, not desirable. In place of this it urged the prosecution of a critical study which should show the resources and equipment and, as far as possible, the educational and administrative efficiency of colleges and universities. Because of the essential differences in equipment, personnel, and standards exhibited by the different types of higher institutions, it was deemed wise that separate studies should be made of colleges of arts and sciences, engineering schools, schools of agriculture, schools of mines, and teachers' colleges. As representing the largest class of institutions, and also the only ones not subject to the definite test of professional competency, the committee agreed that colleges of arts and sciences should be the first object of its study.

SPECIAL INQUIRY TO COLLEGES OF ARTS AND SCIENCES.

The committee was impressed by the success of the procedure of the North Central Association of Colleges and Secondary Schools in establishing a group of categories for recording the administrative efficiency and equipment of institutions. At a meeting of this association held in March, 1914, the following 10 categories were adopted as significant of collegiate standing:

1. Number of faculty in independent charge of classes.
2. Number of faculty with degree of doctor of philosophy.
3. Number of matriculated students.
4. Number of degrees granted in course.
5. Number of elementary courses of instruction actually given.
6. Number of advanced courses.
7. Number of professional courses.
8. Expenditures for salaries.
9. Hours of class instruction required of members of the faculty.
10. Material equipment.

The committee took these categories as the basis for its inquiry. It instructed the chairman and secretary to prepare blanks to be sent to the colleges of arts and sciences of the United States which would seek information on these and the following matters:

(*a*) Admission requirements.
(*b*) Requirements for degrees.
(*c*) Endowment and income (indebtedness).
(*d*) An analysis of the advanced degrees held by members of the faculty.
(*e*) The number of students and their distribution by classes.
(*f*) The ratio of courses announced in the catalogue to those actually given.
(*g*) The annual appropriations for laboratories and libraries.

The blank prepared by the chairman and secretary was sent to members of the committee for suggestions and reported to various association meetings. As the result of these efforts, numerous modifications were made. The blank as finally approved is given below. It was issued by the committee to the institutions early in 1916.

DEPARTMENT OF THE INTERIOR.

BUREAU OF EDUCATION.

STATISTICS OF COLLEGES AND UNIVERSITIES, 1915-16.

COLLEGE OF ARTS AND SCIENCES.

(Do not include statistics of other departments or schools, e. g., engineering, agriculture, graduate school.)

Name of institution..........

Post office.......... State..........

Legal control (by State, by city, by religious denomination, or nonsectarian)..........

Name of president..........

Year in which bachelor's degree was first conferred..........

SIZE OF DIVISION.

(By "division" is meant a group of students meeting together for a regular exercise in a course. Thus, if there is one meeting of a chemistry class for lecture and this class then breaks up into laboratory divisions, the arrangement should be reported as one lecture division and so many laboratory divisions.)

Number of students in each of the five largest lecture divisions..........

Number in each of the five largest recitation divisions..........

Number in each of the five largest laboratory divisions..........

Number in each of the five smallest divisions..........

Exact average of all divisions in both laboratory and nonlaboratory subjects. (If this average can not be given exactly, it should be estimated)..........

....

DEPARTMENTS.

Underline the names of the departments in the following list in which at least the full time of one professor is devoted to college instruction to the exclusion of any other teaching:

English; modern languages (or French, German) other than English; ancient languages; history; philosophy; economic, political, and social sciences; mathematics; physics; chemistry; biology (or zoology and botany); geology. (If more than one teacher gives full time to any of these subjects, specify the number. If two or more of the above subjects are taught by the same teacher, specify in detail what combinations are made.) ....

....

....

....

....

....

....

COLLEGE OF ARTS AND SCIENCES; PROFESSORS AND INSTRUCTORS—NUMBER, DEGREES, TEACHING HOURS, SALARIES, ETC.

Faculty [persons in independent charge of classes (not counting readers, student assistants, etc.)].	Number holding no degrees.		Number holding only bachelor's degree.[1]		Number holding master's degree [1] and none higher (excluding honorary degrees).		Number holding doctor's degree [1] (excluding honorary degrees).[2]		Number teaching more than 15 credit hours a week in nonlaboratory subjects.		Number teaching 15 credit hours a week in nonlaboratory subjects.		Number teaching more than 15 credit hours a week in laboratory subjects (3 hours laboratory instruction to be reckoned as equal to 1 hour classroom instruction).		Number teaching 15 credit hours a week in laboratory subjects (3 hours laboratory instruction to be reckoned as equal to 1 hour classroom instruction).		Average number of teaching hours for all those teaching 15 hours a week or less (3 hours laboratory instruction to be reckoned as equal to 1 hour classroom instruction).	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Professors																		
Associate professors																		
Assistant professors																		
Instructors																		
Lower ranks																		
Total																		

[1] List below the institutions from which degrees were taken:

Bachelor's.	*Master's.*	*Doctor's.*

[2] List below the number of honorary degrees and the names of the institutions granting them:

COLLEGES OF ARTS AND SCIENCES; PROFESSORS AND INSTRUCTORS—NUMBER, DEGREES, TEACHING HOURS, SALARIES, ETC.—Continued.

Average number of teaching hours per week for those having independent charge of classes.		Maximum salary.		Number drawing maximum salary of rank.		Minimum salary.		Number drawing minimum salary of rank.		Average salary of rank.		Number giving full time to college instruction.		Number giving part time to preparatory instruction.		Number[1] giving instruction in both college and department of engineering, education, or commerce.		Number[1] giving instruction in both college and graduate school.		Total number of faculty.
Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	
		$	$			$	$			$	$									
......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......

---

[1] This column to be filled out only by institutions having professional or graduate departments.

STUDENTS, REQUIREMENTS, DEGREES, AND COURSES.

Classes of students.	Students.			Number entering in September, 1915.		Number in each college class, 1915-16.								Number of graduates of secondary schools entering in September, 1915.		Number of A. B. and B. S. graduates of past 5 years who have taken master's degree at other institutions after—				Degrees or certificates granted in 1915 for work in course.[1]		
						Freshman.		Sophomore.		Junior.		Senior.				One year of graduate study.		Two years of graduate study.		A. B.	B. S.	Other baccalaureate degrees.
	Men.	Women.	Total.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.			
Regular students																						
Conditioned students [2]																						
Special or unclassified students																						
Total college students																						
Music, art, or expression students																						
Preparatory students																						
Professional students [3]																						

Number of standard units required for admission ....

When was this number first made effective? ....

Number of standard units previously required ....

Maximum number of entrance conditions allowed ....

How soon after entrance must all entrance conditions be made up? ....

How are conditioned students rated? ....

Conditions under which special students are admitted ....

Number of semester hours required for bachelor's degree [4] ....

When was this number first made effective? ....

State total number of subject courses (not counting courses duplicated [1]) announced in catalogue of 1915-16 as open to undergraduates ....

Number of these not given during academic year 1915-16 ....

Number of these not given during each of past five years ....

Is the institution a junior college? (By a junior college is meant an institution offering two years' work of college grade, or at least thirty year-hours beyond the regular four years of secondary training, but not equipped for a four-year college course leading to the bachelor's degree.) ....

FINANCIAL.

(Institutions in which the department of arts and sciences is only one of several departments are requested to give the proportion of the total expenditures under the following items devoted to this department. If this is impossible, give institutional expenditures and note the fact.)

Expenditures for 1914-15:

For administration, including handling of institution's funds .... $..........

For educational services—

Salaries of college teachers ....

Salaries of teachers in other departments ....

For increase of plant and lasting improvements ....

For maintenance of grounds and buildings ....

For maintenance of scientific laboratories ....

For new materials and apparatus for scientific laboratories ....

For maintenance of library (including librarian's salary, if that officer devotes all his time to care of the library) ....

For purchase of new books and periodicals for library ....

Average annual expenditure for past five years for new materials and apparatus for scientific laboratories ....

Average annual expenditures for past five years for new books and periodicals ....

What is the indebtedness of this institution? ....

Is there any reason why indebtedness should not be subtracted from value of property? [5] ....

Average annual fees per student for matriculation, library, and other educational services (excluding tuition) ....

Average annual tuition fees ....

---

[1] Please fill out this category for all except preparatory and professional students.

[2] Conditioned students are those who have been admitted to college as candidates for a degree during the current year with less than the prescribed number of entrance units.

[3] Universities and colleges having professional departments such as engineering, commerce, education, law, etc., are asked to summarize the figures for these departments under the head of professional.

[4] A semester hour is one hour a week of lecture or classroom instruction or its credit equivalent of laboratory instruction for a semester.

[5] Value of property and receipts from all sources are reported annually to this Bureau. These figures will be compared with the returns asked for on this blank.

It has evidently been very difficult for college officers to secure much of the detailed information called for in this blank. The difficulty has been most acutely felt by large institutions of complicated organization. Many of the larger universities were apparently unable to separate the data relating to their colleges of arts and sciences without an unjustifiable expenditure of time and money. Returns from nearly all institutions were slow in coming in. Of the 500 colleges addressed, 252 replied in the course of a year. This represents, approximately, 50 per cent of the colleges of arts and sciences in the country. The committee was convinced that returns had been received from a sufficient number to render the study significant and valuable. The principal items were accordingly tabulated by the Bureau of Education in a single table (Table 1). This table presents, in the committee's judgment, the fundamental facts regarding the resources and standards of colleges of arts and sciences as far as these may be recorded statistically. To the eye of the initiated the entries in this table tell their own story. A somewhat extended interpretation of them appears to be needed, however, to make the record generally clear.

SUBCOMMITTEE ON DEFINITION OF COLLEGE STANDARDS.

The committee conferred upon a subcommittee consisting of Messrs. Salisbury, Young, and Capen the task of interpretation. The subcommittee was instructed to define, if it seemed desirable, the term "college," and possibly other terms relating to the inquiry.

The subcommittee concluded that, in view of the large number of definitions which already have some currency, a formal attempt to define the term "college" would at this time tend to confuse the issue. It therefore adopted a different procedure.

It studied with care the returns as tabulated in Table 1, and on the basis of these, supplemented by the knowledge which its members had from personal contact of a large number of collegiate institutions, it formulated a group of categories which it judged to be important in estimating college standards and the vitality of collegiate institutions. It then indicated the minimum requirement under each of these categories which every institution should strive as soon as possible to attain. It has grouped the returns from the inquiry so that the standing under each of the categories of the institutions reporting is clearly exhibited. This grouping appears in Tables 2 to 13.

A further word of explanation is perhaps desirable. The committee is of the opinion that, in order to be regarded as an acceptable college, an institution may not necessarily be expected immediately to meet the minimum requirement under every one of the categories. For example, a college might do good work "in a restricted field" with a faculty smaller than is noted under Section III below and with an income smaller than suggested in Section I below. The committee's purpose is rather to outline what may be regarded as the essential scope of a successful collegiate enterprise. With smaller resources and lower standards in any of the categories mentioned, no institution may view its situation with complacency. Due allowance is made in estimating the standing of institutions under the following categories for denominational institutions whose budgets contemplate no salaries for instructors and whose discipline precludes the separation of the college from the preparatory school. The suggested minimum requirements under 13 heads follow:

SUGGESTED REQUIREMENTS FOR A SUCCESSFUL COLLEGE OF ARTS AND SCIENCES.

I. A college of arts and sciences should have an annual income of at least $40,000. At least three-fifths of an income as small as $40,000 should be expended for salaries for teaching and administration. Exception is made of certain denominational institutions whose teaching staffs work without salaries.

II. A study of conditions at numerous substantial institutions indicates that college work of standard grade costs somewhere in the neighborhood of $200 a year per student. The minimum productive endowment for a college of arts and sciences should be $250,000. It is noted, however, that with advancing standards and prices this amount should be rapidly increased; probably twice as much will be needed in the near future to give an institution the assurance of stability. Institutions should strive to bring their endowment to the point where it will yield at least half of the money needed for annual expenses.

III. A college of arts and sciences should have as many as 11 departments, in each of which at least one teacher devotes his whole time to collegiate instruction. Some of the larger departments will require more than one instructor. The following departments are suggested: English; modern languages (or French or German or Spanish) other than English; ancient languages; history; philosophy and psychology; economic, political, and social sciences; mathematics; physics; chemistry; biology (or zoology and botany); geology, and geography. In addition it seems desirable, wherever possible, to separate the departments of Romance and Germanic languages, and some of the other groups might well be divided, especially in the larger colleges.

IV. A college of arts and sciences should have a faculty of at least 15 members devoting full time to college work.

V. If a college of arts and sciences maintains an academy or preparatory department, this department should be "distinct in students, faculty, and discipline." Exception may be made, as noted above, of certain denominational institutions whose traditions and policy require the inclusion of secondary education with collegiate education under the same institutional control. In such cases the preparatory department should be administratively separated from the college department.

VI. Members of the faculty of a college of arts and sciences should have pursued graduate study in addition to the bachelor's degree. At least one-fourth of the faculty should hold the degree of doctor of philosophy or degrees representing equivalent scholarly attainments *bestowed by reputable graduate schools.* At least three-fourths of the faculty should have secured the master's degree in course at a reputable graduate school.

VII. Fifteen hours of teaching a week should be regarded as the maximum program of a college teacher.

VIII. Fifteen or sixteen credit hours a week for each student for 36 weeks a year for four years should be regarded as the normal program of work for students.

IX. While heretofore 14 units of secondary work has been regarded as the acceptable minimum for admission to college, and at the time of the issuance of this inquiry represented the standard set by most standardizing agencies, there is now a general tendency to raise this requirement to 15 units. A college of arts and sciences should require 15 units for unconditional admission. In judging the reports of colleges appearing in this study, however, the prevailing standard of 1915 should be taken into account.

X. The maximum number of conditions allowed should not exceed two.

XI. The average salary for assistant professors in 25 colleges[1] of unquestioned standing, in Table 1, is $1,369. The average salary of professors at the same group of institutions is $2,174. Conditions of living differ, and an absolute standard can not justly be set up. Colleges should plan to make their salary schedules approximate at least the foregoing averages.

XII. Recitation or quiz sections should not contain more than from 20 to 30 students. Fifteen or sixteen students should be the limit in laboratory sections.

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[1] Pomona College, Cal.; Mills College, Cal.; Trinity College, Conn.; George Washington University, D. C.; Emory College, Ga.; Knox College, Ill.; Butler College, Ind.; Morningside College, Iowa; Washburn College, Kans.; H. Sophie Newcomb Memorial College, La.; Bowdoin College, Me.; Goucher College, Md.; Boston University, Mass.; Clark College, Mass.; Carleton College, Minn.; Washington University, Mo.; Hobart College, N. Y.; Ohio Wesleyan University; Reed College, Oreg.; Lafayette College, Pa.; Haverford College, Pa.; Vanderbilt University, Tenn.; Middlebury College, Vt.; Randolph-Macon Woman's College, Va.; Beloit College, Wis.

XIII. At least $1,000 a year should be expended for the purchase of new books and periodicals for the library. Probably two or three times this figure would be needed to keep the library in a sound condition. A similar sum should be appropriated annually for the purchase of new equipment and apparatus for scientific laboratories.

TABLES.

Table 1 is a summary in which the principal facts derived from the inquiry are presented. The succeeding tables exhibit the same material, but are designed for convenience of reference. Each table shows the status of all the reporting institutions with respect to one or two of the suggested requirements for a successful college of arts and sciences or juxtaposes two related categories appearing in the summary table. Each is preceded by a brief statement of the points illustrated.

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART I: *Professors and instructors.*

Location.	Institution.	For men, for women, or coeducational.	Control.	Year in which bachelor's degree was first conferred.	Professors and instructors.																
					Total number of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher (excluding honorary degrees).	Number holding doctor's degree (excluding honorary degrees).	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.	Average salary.								Number giving part time to preparatory instruction.	Average size of classes.	Eleven specified departments or fewer.
											Professors.		Associate professors.		Assistant professors.		Instructors.				
											Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
ALABAMA.																					
University	University of Alabama	Coed	State	1832	24	5	8	10	13	4	$2,100	......	$1,700	......	$1,125	......	$600	......	0	(1)	11
ARIZONA.																					
Tucson	University of Arizona	Coed	State	1895	28	7	10	6	15	0	2,230	$2,200	1,900	$1,900	1,825	$1,340	1,500	$1,425	0	6	11
ARKANSAS.																					
Conway	Central College	Women	Bapt.	1878	18	6	3	1	13	2	1,700	800	......	......	......	......	......	......	3	18	4
Do	Hendrix College	Coed	M. E. So.	1887	13	7	6	......	17	9	1,500	......	1,500	......	1,100	......	900	......	......	15	2
CALIFORNIA.																					
Claremont	Pomona College	Coed	Nonsect.	1894	45	17	12	12	13	0	1,890	2,100	1,600	......	1,418	1,200	966	750	0	20	11
Los Angeles	Occidental College	Coed	Nonsect.	1894	22	5	6	8	15	2	1,100	1,050	......	......	......	......	......	......	......	25	11
Mills College	Mills College	Women	Nonsect.	1889	34	11	7	5	13	4	1,700	1,633	......	......	......	1,216	......	967	......	12	7
Redlands	University of Redlands	Coed	Bapt.	1910	20	7	6	......	16	2	1,500	1,500	......	1,200	......	......	......	......	6	10	11
Santa Clara	University of Santa Clara	Men	R. C.	1857	8	......	......	......	12	......	......	......	......	......	......	......	......	......	2	25	11
Stanford University	Leland Stanford Junior University	Coed	Nonsect.	1892	145	28	37	71	11	......	......	......	......	......	......	......	......	......	0	......	......

COLORADO.																					
Boulder	University of Colorado	Coed	State	1882	76	22	23	24	9	4	2,550	2,550	......	......	1,525	1,525	900	900	0	18	11
ColoradoSprings	Colorado College	Coed	Nonsect.	1882	35	9	14	8	14	4	......	......	......	......	......	......	......	......	0	21	11
University Park	University of Denver	Coed	M. E.	1884	31	7	11	10	13	5	2,100	1,233	......	......	1,400	1,000	933	600	3	(2)	11
CONNECTICUT.																					
Hartford	Trinity College	Men	Nonsect.	1827	25	4	9	13	15	2	2,400	......	......	......	1,000	......	1,000	......	0	(3)	11
New Haven	Yale University	Men	Nonsect.	1702	104	4	16	82	15	......	4,250	......	......	......	2,300	......	1,350	......	0	20	11
DISTRICT OF COLUMBIA.																					
Washington	Gallaudet College	Coed	National	1869	16	4	6	2	......	......	2,450	......	......	......	......	200	1,057	720	......	......	4
Do	George Washington University.	Coed	Nonsect.	1824	38	4	9	14	13	4	1,716	......	......	......	1,066	......	258	500	0	23	11
Do	Howard University (colored).	Coed	National	1872	25	12	11	2	13	14	2,014	......	1,238	......	1,050	......	775	......	1	26	11
FLORIDA.																					
Gainesville	University of Florida	Men	State	1905	17	4	2	10	13	6	......	......	......	......	......	......	......	......	0	22	11
Lake City	Columbia College	Coed	Bapt.	1912	20	6	1	1	24	10	900	400	......	......	......	......	......	......	5	10	3
Tallahassee	Florida State College for Women.	Women	State	1906	21	5	5	7	16	......	2,000	2,000	......	......	1,400	1,400	1,000	1,000	......	15	11
GEORGIA.																					
Athens	University of Georgia	Men	State	1801	31	3	13	13	15	17	2,700	......	1,800	......	1,500	......	1,200	......	0	20	11
Atlanta	Atlanta University (colored).	Coed	Nonsect.	1876	17	4	3	1	6	0	1,225	......	......	......	......	......	......	......	17	14	......
College Park	Cox College	Women	Nonsect.	1904	11	5	9	1	16	11	950	750	......	......	......	......	......	......	3	......	7
Dahlonega	North Georgia Agricultural College.	Coed	State	1878	14	7	2	......	......	......	1,650	1,000	......	......	......	......	......	......	5	......	3
Decatur	Agnes Scott College	Women	Nonsect.	1906	28	3	13	8	11	0	1,500	1,000	......	$900	......	......	......	750	......	20	11
Demorest	Piedmont College	Coed	Nonsect.	1899	16	11	2	......	15	0	......	......	......	......	......	......	......	......	5	25	5
Forsyth	Bessie Tift College	Women	Bapt.	......	25	18	2	1	4	5	2,000	1,000	......	......	......	......	......	......	......	18	8
Gainesville	Brenau College	Women	Nonsect.	1880	16	6	8	1	12	1	1,350	937	......	......	0	950	0	600	0	20	11
Oxford	Emory University	Men	M. E. So.	1841	16	7	4	5	10	0	2,200	......	1,600	......	1,500	......	......	......	0	20	11
Rome	Shorter College	Women	Bapt.	1882	12	9	4	......	16	4	......	......	......	......	......	......	......	......	......	......	4
IDAHO.																					
Moscow	University of Idaho	Coed	State	1896	40	14	10	11	10	5	2,180	2,150	1,800	......	1,466	1,500	1,200	1,200	0	17	11
ILLINOIS.																					
Aurora	Aurora College	Coed	Chris.	1905	12	6	0	2	20	5	......	......	......	......	......	......	......	......	6	11	8
Bloomington	Illinois Wesleyan University.	Coed	M. E.	1853	18	5	8	1	16	7	1,250	1,050	......	......	......	......	......	......	3	15	8
Carlinville	Blackburn College	Coed	Presb.	1870	12	9	1	1	15	4	1,000	650	......	......	......	......	......	......	8	10	7

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[1] Laboratory, 36; nonlaboratory, 32.

[2] Laboratory, 10; nonlaboratory, 25.

[3] Laboratory, 13; nonlaboratory, 17.

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART I: *Professors and instructors*—Continued.

Location.	Institution.	For men, for women, or coeducational.	Control.	Year in which bachelor's degree was first conferred.	Professors and instructors.																
					Total number of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher (excluding honorary degrees).	Number holding doctor's degree (excluding honorary degrees).	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.	Average salary.								Number giving part time to preparatory instruction.	Average size of classes.	Eleven specified departments or fewer.
											Professors.		Associate professors.		Assistant professors.		Instructors.				
											Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
ILLINOIS—con.																					
Chicago	De Paul University	Coed	R. C.	1899	20	3	12	2	10	1	$1,457	$950	......	......	......	......	......	......	7	12	11
Do	Loyola University	Men	R. C.	1876	18	......	......	......	10	0	......	......	......	......	......	......	......	......	6	24	11
Decatur	James Millikin University.	Coed	Presb.	......	39	17	6	8	......	11	......	......	......	......	......	......	......	......	......	12	11
Galesburg	Knox College	Coed	Nonsect.	1846	26	8	10	8	11	6	1,768	......	$1,100	......	$865	$797	......	......	0	24	11
Jacksonville	Illinois Woman's College	Women.	M. E.	1909	16	7	9	......	14	1	......	1,200	......	......	......	900	......	......	4	14	11
Lake Forest	Lake Forest College	Coed	Presb.	1879	20	5	7	7	11	1	2,175	......	1,700	......	1,600	1,250	......	$500	......	(1)	11
Mount Carroll	Frances Shimer School	Women.	Bapt.	(2)	18	8	3	1	20	14	......	......	......	......	......	......	......	1,000	17	6	......
Naperville	Northwestern College	Coed	Ev. Assn.	1867	12	2	9	1	16	9	1,365	800	......	......	......	......	......	......	1	19	11
Rockford	Rockford College	Women.	Nonsect.	1886	28	8	7	7	13	4	1,400	1,400	......	......	......	......	......	1,166	......	16	11
Rock Island	Augustana College	Coed	Ev. Luth.	1877	14	4	6	1	18	11	1,418	......	......	......	1,250	......	......	350	7	16	7
INDIANA.																					
Bloomington	Indiana University	Coed	State	1830	233	28	59	55	13	23	3,153	......	2,135	$2,300	1,553	1,600	$1,107	1,062	0	26	11
Crawfordsville	Wabash College	Men	Nonsect.	1838	21	1	7	4	15	4	......	......	......	......	......	......	......	......	0	(3)	11
Earlham	Earlham College	Coed	Friends	1862	34	9	12	11	12	7	......	......	......	......	......	......	......	......	0	13	11
Franklin	Franklin College	Coed	Nonsect.	1847	18	2	12	1	10	7	1,300	1,150	......	......	......	......	......	......	8	23	11
Greencastle	De Pauw University	Coed	M. E.	1894	37	10	14	9	......	8	1,950	......	......	1,500	1,700	1,200	1,000	550	1	......	11
Indianapolis	Butler College	Coed	Chris.	1856	20	4	6	10	15	13	1,873	1,873	......	......	750	750	475	475	......	19	11

Notre Dame	University of Notre Dame.	Men	R. C.	......	80	30	15	5	10	5	......	......	......	......	......	......	......	......	10	(1)	11
Upland	Taylor University	Coed	M. E	......	21	10	2	2	......	11	......	......	......	......	......	......	......	......	......	......	5
IOWA.																					
Cedar Falls	Iowa State Teachers College.	Coed	State	1904	98	35	31	8	......	......	......	......	......	......	......	......	......	......	31	22	7
Cedar Rapids	Coe College	Coed	Nonsect.	1884	43	9	13	4	16	8	$1,500	$1,400	$1,000	......	$900	......	$800	$800	0	22	11
Clinton	Wartburg College	Men	Luth	......	9	5	2	0	20	0	......	......	......	......	......	......	......	......	7	......	......
Des Moines	Des Moines College	Coed	Bapt	1875	12	8	6	1	17	0	......	......	......	......	......	......	......	......	2	17	......
Do	Drake University	Coed	Nonsect.	1882	31	4	10	10	15	1	2,300	2,000	......	......	1,300	$1,300	......	......	0	20	11
Fairfield	Parsons College	Coed	Presb	1886	12	3	8	1	13	2	1,400	0	......	......	......	......	850	750	0	16	9
Iowa City	State University of Iowa.	Coed	State	1858	148	27	51	50	10	12	2,740	3,000	2,400	......	1,777	1,162	1,162	1,163	0	22	11
Mount Vernon	Cornell College	Coed	M. E	1858	31	8	14	5	......	7	1,450	1,450	......	......	1,150	1,150	850	850	8	20	11
Pella	Central University of Iowa.	Coed	Bapt	1851	17	6	6	2	15	6	......	......	......	......	......	......	......	......	11	12	9
Sioux City	Morningside College	Coed	M. E	1891	19	2	11	6	16	8	1,454	1,200	......	......	950	......	0	800	3	18	11
Storm Lake	Buena Vista College	Coed	Presb	1896	10	3	7	0	15	4	1,200	1,000	......	......	......	......	......	......	6	10	11
KANSAS.																					
Atchison	Midland College	Coed	Luth	1891	18	4	8	2	17	9	1,200	600	......	......	......	......	......	......	6	18	5
Emporia	College of Emporia	Coed	Presb	1887	18	5	11	1	17	8	1,790	1,320	......	......	......	......	750	775	0	17	11
Ottawa	Ottawa University	Coed	Bapt	1886	11	3	7	1	17	6	1,372	1,500	......	......	......	......	......	......	0	18	11
Salina	Kansas Wesleyan University.	Coed	M. E	......	25	1	10	1	15	6	1,050	1,050	......	......	......	......	......	......	5	18	8
Sterling	Cooper College	Coed	U. P	1892	10	4	6	0	17	9	1,050	850	......	......	......	......	......	......	......	10	8
Topeka	Washburn College	Coed	Nonsect.	1868	24	8	12	8	15	5	1,450	1,220	1,350	......	1,200	950	1,100	720	6	18	11
Winfield	Southwestern College	Coed	M. E	1889	24	4	8	2	14	3	1,200	1,000	......	......	......	......	......	......	3	20	8
KENTUCKY																					
Bowling Green	Ogden College	Men	Nonsect.	1881	8	...	3	......	20	0	1,300	......	......	......	......	......	......	......	2	8	7
Danville	Centre College	Men	Presb	1826	12	1	1	10	13	1	......	......	......	......	......	......	......	......	......	18	9
Georgetown	Georgetown College	Coed	Bapt	1832	26	9	7	1	12	0	1,500	......	......	......	......	......	......	......	5	26	1
Lexington	University of Kentucky	Coed	State	......	28	18	15	6	15	7	......	......	......	......	......	......	......	......	......	20	17
Do	Transylvania College	Coed	Nonsect.	1806	26	9	9	6	14	6	1,500	......	......	......	......	......	......	......	0	15	9
Louisville	University of Louisville.	Coed	City	1908	24	6	6	7	......	2	1,800	1,800	1,600	$1,600	1,500	1,500	800	800	0	(5)	11
Russelville	Bethel College	Men	Bapt	1857	6	4	1	0	16	3	1,270	0	......	......	......	......	......	......	1	6	5
LOUISIANA.																					
New Orleans	H. Sophie Newcomb Memorial College.	Women	Nonsect.	1891	29	3	9	11	13	5	2,500	1,875	......	2,000	......	1,320	840	1,200	0	13	11
Do	Loyola University	Men	R. C	1911	10	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	

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[1] Laboratory, 8; nonlaboratory, 15.

[2] No degree.

[3] Laboratory, 15; nonlaboratory, 21½.

[4] Laboratory, 30; nonlaboratory, 4.

[5] Laboratory, 10½; nonlaboratory, 17½.

STUDENTS, REQUIREMENTS, DEGREES, AND COURSES.

Classes of students.	Students.			Number entering in September, 1915.		Number in each college class, 1915-16.								Number of graduates of secondary schools entering in September, 1915.		Number of A. B. and B. S. graduates of past 5 years who have taken master's degree at other institutions after—				Degrees or certificates granted in 1915 for work in course.[1]		
						Freshman.		Sophomore.		Junior.		Senior.				One year of graduate study.		Two years of graduate study.		A. B.	B. S.	Other baccalaureate degrees.
	Men.	Women.	Total.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.			
Regular students																						
Conditioned students [2]																						
Special or unclassified students																						
Total college students																						
Music, art, or expression students																						
Preparatory students																						
Professional students [3]																						

Number of standard units required for admission

When was this number first made effective?

Number of standard units previously required

Maximum number of entrance conditions allowed

How soon after entrance must all entrance conditions be made up?

How are conditioned students rated?

Conditions under which special students are admitted

Number of semester hours required for bachelor's degree [4]

When was this number first made effective?

State total number of subject courses (not counting courses duplicated [1]) announced in catalogue of 1915-16 as open to undergraduates

Number of these not given during academic year 1915-16

Number of these not given during each of past five years

Is the institution a junior college? (By a junior college is meant an institution offering two years' work of college grade, or at least thirty year-hours beyond the regular four years of secondary training, but not equipped for a four-year college course leading to the bachelor's degree.)

FINANCIAL.

(Institutions in which the department of arts and sciences is only one of several departments are requested to give the proportion of the total expenditures under the following items devoted to this department. If this is impossible, give institutional expenditures and note the fact.)

Expenditures for 1914-15:
  For administration, including handling of institution's funds .... $..........
  For educational services—
    Salaries of college teachers ....
    Salaries of teachers in other departments ....
  For increase of plant and lasting improvements ....
  For maintenance of grounds and buildings ....
  For maintenance of scientific laboratories ....
  For new materials and apparatus for scientific laboratories ....
  For maintenance of library (including librarian's salary, if that officer devotes all his time to care of the library) ....
  For purchase of new books and periodicals for library ....
Average annual expenditure for past five years for new materials and apparatus for scientific laboratories ....
Average annual expenditures for past five years for new books and periodicals ....
What is the indebtedness of this institution? ....
Is there any reason why indebtedness should not be subtracted from value of property?[5] ....
Average annual fees per student for matriculation, library, and other educational services (excluding tuition) ....
Average annual tuition fees ....

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[1] Please fill out this category for all except preparatory and professional students.

[2] Conditioned students are those who have been admitted to college as candidates for a degree during the current year with less than the prescribed number of entrance units.

[3] Universities and colleges having professional departments such as engineering, commerce, education, law, etc., are asked to summarize the figures for these departments under the head of professional.

[4] A semester hour is one hour a week of lecture or classroom instruction or its credit equivalent of laboratory instruction for a semester.

[5] Value of property and receipts from all sources are reported annually to this Bureau. These figures will be compared with the returns asked for on this blank.

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART I: *Professors and instructors*—Continued.

Location.	Institution.	For men, for women, or coeducational.	Control.	Year in which bachelor's degree was first conferred.	Professors and instructors.																
					Total number of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher (excluding honorary degrees).	Number holding doctor's degree (excluding honorary degrees).	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.	Average salary.								Number giving part time to preparatory instruction.	Average size of classes.	Eleven specified departments or fewer.
											Professors.		Associate professors.		Assistant professors.		Instructors.				
											Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
NEBRASKA.																					
Bellevue	Bellevue College	Coed	Presb	1889	14	7	3	2	17	4	$1,000	$1,000					$900	$900	7	10	7
College View	Union College	Coed	S. D. Ad.	1894	26	6	6	0	20	12									12	17	4
Crete	Doane College	Coed	Cong.	1877	18	7	5	3	11	5									2	11	8
Lincoln	University of Nebraska	Coed	State	1873	95	13	38	38	13	25	2,632	2,300	$1,638	$1,390	$1,257	$1,125	817	720	6	15	11
NEW HAMPSHIRE																					
Durham	New Hampshire College of Agriculture and Mechanic Arts.	Coed	State		31	18	6	4	13	4	2,100	2,000	1,800		1,450	1,200	1,160		0	25	8
NEW JERSEY.																					
Convent Station	College of St. Elizabeth	Women.	R. C.	1902	34	8	8	4	10		2,000	700							4	(1)	11
Kenilworth	Upsala College	Coed	Luth	1905	12	4	4	0	24	8	1,300								9	12	3
NEW MEXICO.																					
Albuquerque	University of New Mexico.	Coed	State		20	13	3	3	14	8	1,700		1,400	1,400	1,200				4	(2)	11

NEW YORK.																					
Albany	New York State College for Teachers.	Coed	State	1897	52	23	10	11	14	0	3,000	3,000	...	...	1,900	1,900	1,400	1,200	6	70	11
Alfred	Alfred University	Coed	Nonsect.	1857	28	8	16	2	11	0	1,500	1,070	1,100	900	...	...	940	700	0	15	11
Annandale	St. Stephen's College	Men	Epis.	1861	9	3	5	1	...	2	...	...	...	...	...	...	...	...	3	7	7
Aurora	Wells College	Women	Nonsect.	1869	31	7	10	9	13	2	2,000	1,180	2,000	1,133	...	...	...	966	0	12	11
Canton	St. Lawrence University	Coed	Nonsect.	1863	16	4	8	3	17	7	1,933	...	...	...	1,250	...	660	...	0	20	11
Elmira	Elmira College	Women	Nonsect.	...	32	13	8	8	13	0	...	...	...	...	...	...	...	...	0	14	11
Geneva	Hobart College	Coed	Nonsect.	1827	26	5	11	8	14	3	1,521	1,500	...	...	1,000	900	1,000	...	0	16	11
New Rochelle	College of New Rochelle.	Women	R. C.	1908	22	5	5	7	...	0	450	400	...	...	...	...	...	...	1	30	9
New York	Barnard College	Women	Nonsect.	1893	88	10	23	54	...	...	...	...	...	...	...	...	...	...	0	...	11
Do	College of the City of New York.	Men	City	1854	142	33	21	70	12	38	4,539	...	2,900	...	2,628	...	2,021	...	14	21	11
Do	Columbia University	Men	Nonsect.	1758	133	17	24	90	...	...	4,815	...	3,259	...	2,359	...	1,509	...	0	22	11
Do	Hunter College of the City of New York.	Women	City	1892	118	28	54	16	16	45	5,750	4,062	3,133	3,500	2,730	3,059	1,950	2,838	0	17	11
Do	New York University	Coed	Nonsect.	1833	47	9	17	21	...	10	2,242	...	...	...	1,931	...	1,221	...	0	23	11
Poughkeepsie	Vassar College	Women	Nonsect.	1867	112	21	22	57	13	0	3,200	...	1,750	...	1,400	...	1,150	...	0	58	11
Rochester	University of Rochester.	Coed	Nonsect.	1851	45	13	14	16	12	0	...	...	...	...	...	...	...	...	0	20	11
Schenectady	Union University	Men	Nonsect.	1797	40	9	15	15	15	10	2,100	...	1,900	...	1,590	...	1,170	...	0	(3)	11
NORTH CAROLINA.																					
Chapel Hill	University of North Carolina.	Coed	State	1798	52	4	21	26	11	3	2,332	...	1,700	...	1,250	...	856	...	0	24	11
Davidson	Davidson College	Men	Presb.	1840	13	1	4	7	15	8	2,000	...	1,650	...	...	...	...	...	0	25	11
Durham	Trinity College	Coed	M. E. So.	1853	28	7	9	12	12	1	...	...	...	...	...	...	...	...	0	30	11
Elon College	Elon College	Coed	Chris.	1890	27	5	11	4	...	11	1,270	...	...	...	900	...	600	...	9	24	11
Guilford College	Guilford College	Coed	Friends	1889	17	9	7	1	13	12	1,225	700	1,000	650	800	750	...	675	9	18	9
Raleigh	Shaw University (colored).	Coed	Bapt.	1878	29	7	1	0	23	14	...	...	...	...	...	...	...	...	29	14	8
Weaverville	Weaver College	Coed	M. E. So.	...	8	3	2	0	14	4	730	650	...	...	...	...	...	...	6	18	...
Winston-Salem.	Salem Academy and College.	Women.	Morav.	1878	35	17	2	0	18	1	1,600	933	400	600	0	850	0	570	15	23	8
NORTH DAKOTA.																					
University	University of North Dakota.	Coed	State	...	55	11	15	24	12	18	2,440	...	1,950	...	1,650	1,500	1,430	1,150	6	17	11
OHIO.																					
Akron	Municipal University of Akron.	Coed	City	1873	21	5	10	3	18	7	1,800	...	...	...	1,200	1,200	1,080	900	0	(4)	11
Athens	Ohio University	Coed	State	1815	36	6	15	8	...	0	1,930	...	...	...	1,310	900	1,225	1,075	1	18	11
Berea	Baldwin-Wallace College	Coed	Ger. M. E.	1850	19	4	11	4	16	8	1,500	...	...	...	1,200	...	900	...	...	25	11
Bluffton	Bluffton College	Coed	Mennon.	...	16	9	7	4	14	4	1,300	...	...	...	1,000	...	850	...	2	11	10
Cedarville	Cedarville College	Coed	R. Presb.	1897	7	4	3	0	16	7	1,300	580	...	...	...	...	...	...	3	...	6
Cincinnati	University of Cincinnati.	Coed	City	1877	236	4	18	41	12	2	3,400	2,500	2,500	...	1,950	1,800	1,400	1,100	0	(5)	11

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[1] Laboratory, 15; nonlaboratory, 25.

[2] Laboratory, 8; nonlaboratory, 13.

[3] Laboratory, 15; nonlaboratory, 16.

[4] Laboratory, 11; nonlaboratory, 14.

[5] Laboratory, 36; nonlaboratory, 30.

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART I: *Professors and instructors*—Continued.

Location.	Institution.	For men, for women, or coeducational.	Control.	Year in which bachelor's degree was first conferred.	Professors and instructors.																
					Total number of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher (excluding honorary degrees).	Number holding doctor's degree (excluding honorary degrees).	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.	Average salary.								Number giving part time to preparatory instruction.	Average size of classes.	Eleven specified departments or fewer.
											Professors.		Associate professors.		Assistant professors.		Instructors.				
											Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
OHIO—contd.																					
Cleveland	Western Reserve University.	Coed	Nonsect.	1830	79	9	13	50	10	1	$3,300	$2,450	......	......	......	......	......	......	0	18	11
Columbus	Capital University	Men	Luth.	1885	14	3	7	3	12	2	1,475	......	......	......	......	......	......	......	8	20	9
Dayton	St. Mary College	Men	R. C.	1885	16	2	4	7	17	0	......	......	......	......	......	......	......	......	......	12	9
Defiance	Defiance College	Coed	Chris.	......	16	4	6	4	14	4	......	......	......	......	......	......	......	......	3	15	11
Delaware	Ohio Wesleyan University.	Coed	M. E.	1846	59	15	20	17	12	7	2,020	1,850	$1,600	$1,250	$1,250	$1,100	$1,000	$750	1	26	11
Gambier	Kenyon College	Men	P. E.	1829	14	1	5	8	14	0	1,650	......	......	......	1,300	......	......	......	......	14	11
Marietta	Marietta College	Coed	Nonsect.	1838	18	5	2	7	12	0	1,800	......	......	......	......	......	......	600	0	18	11
New Concord	Muskingum College	Coed	U. Presb.	1839	38	6	11	2	......	10	1,200	1,200	......	......	......	......	......	......	5	18	11
Oxford	Miami University	Coed	State	1826	31	7	8	16	12	......	2,331	......	1,583	......	1,319	......	......	......	0	21	11
Do.	Oxford College for Women.	Women.	Nonsect.	1886	19	4	1	7	7	4	......	......	......	......	......	......	......	......	0	13	10
Do.	Western College for Women.	Women.	Nonsect.	1895	32	12	10	6	11	0	1,300	1,205	1,200	1,070	......	......	......	875	0	13	10
Painesville	Lake Erie College	Women.	Nonsect.	1899	21	6	9	3	12	1	......	1,181	......	1,042	......	......	......	940	0	(1)	11
Rio Grande	Rio Grande College	Coed	F. Bapt.	1883	10	4	3	1	......	6	945	783	......	......	......	......	......	300	7	......	5
Westerville	Otterbein University	Coed	U. B.	1857	17	2	7	6	16	......	1,385	1,133	......	......	......	......	......	......	4	16	11
Wooster	College of Wooster	Coed	Presb.	1870	32	11	12	8	14	12	1,750	1,350	......	......	1,300	1,200	1,380	1,200	3	20	11

OKLAHOMA.																					
Guthrie	Methodist University of Oklahoma.	Coed	M. E.	1912	9	4	3	1	22	8	1,100	1,100							2	10	6
Kingfisher	Kingfisher College	Coed	Cong.	1900	9	3	5	1	19	5	1,100	1,100							2	6	9
Norman	University of Oklahoma.	Coed	State[1]	1898	63	20	24	18	14	4	2,075	1,800	1,693		1,257	1,200	977	1,050	0		11
OREGON.																					
Albany	Albany College	Coed	Presb.	1883	13	1	8	2	12	2	1,260	1,050						700	4	8	8
Forest Grove	Pacific University	Coed	Cong.	1863	20	7	5	1	13	3	1,150	800					1,100	750	0	13	11
McMinnville	McMinnville College	Coed	Bapt.	1884	16	6	3	0	22	10	975	850							8	14	8
Newberg	Pacific College	Coed	Friends	1893	10	10	0	0	20	3	950	825							6	20	2
Portland	Reed College	Coed	Nonsect.	1915	19	3	3	12			2,700	2,080			1,500				0	10	11
Salem	Willamette University	Coed	M. E.	1859	13	1	7	4	14	5	1,350									11	10
PENNSYLVANIA.																					
Bethlehem	Moravian College	Men	Morav.	1870	8	2	1	5	20	5										11	4
Bryn Mawr	Bryn Mawr College	Women	Nonsect.	1888	43	1	3	39		0	2,923	3,000	2,133	2,180	1,600	1,600				14	11
Beaver	Beaver College	Women	M. E.	1903	8	1	7	0	2	3	1,313	1,150							2	10	6
Chambersburg	Wilson College	Women	Presb.	1873	24	8	10	5	11	0	2,000	900							0	20	8
Easton	Lafayette College	Men	Presb.	1836	50	23	11	13	12	0	2,150		1,600		1,500		950		0	20	11
Gettysburg	Pennsylvania College	Coed	Luth.	1834	26	6	7	11	16	10	1,550				1,400		850			25	11
Haverford	Haverford College	Men	Friends	1856	25	2	5	15	11	2	3,600		2,960		1,500				0	15	11
Lancaster	Franklin and Marshall College.	Men	Ref.	1853	16	2	10	4	15	10	1,950								0	22	11
Lincoln University.	Lincoln University (colored).	Men		1867	13	7	5	3	12	0	1,400			1,000					0	28	6
Meadville	Allegheny College	Coed	M. E.	1821	25	4	9	10	11	0	2,100				1,300	1,300	1,000		0	20	11
Mechanicsburg	Irving Female College	Women	Luth.	1860	19	2	5	1	18	2	1,325	820							9	([2])	3
Myerstown	Albright College	Coed	U. Evang.	1887	10	2	6	2	13	5	1,250								6	14	7
New Wilmington.	Westminster College	Coed	U. Presb.	1899	20	2	7	1	15	0	1,500	1,200								20	11
Philadelphia	Drexel Institute	Coed	Nonsect.	1915	69	25	9	1	9	1	2,800	1,600			1,560	1,260	1,090	900	5	([3])	11
Do	University of Pennsylvania.	Men	Nonsect.	1757	154	14	23	114		0									0		11
Selinsgrove	Susquehanna University	Coed	Luth.	1885	23	4	11	3	18	23	1,000	500							1	25	5
State College	Pennsylvania State College.	Coed	State	1861	[4] 65	16	25	18	14	14	1,987		1,604	1,300	1,278		1,056	1,050	0		11
					[5] 28	7	17	4	16	25	2,075		1,500	0	1,270		1,030		0		3
Swarthmore	Swarthmore College	Coed	Nonsect.	1873	39	8	10	19	11	1										22	11
Washington	Washington and Jefferson College.	Men	Nonsect.	([6])	32	3	7	11	10	1										28	11
Waynesburg	Waynesburg College	Coed	Presb.	1851	11	2	8	1	18	10	1,000									10	11
SOUTH CAROLINA.																					
Charleston	College of Charleston	Men	City	1794	8	3	3	2	13	0	1,512									12	6
College Place	Columbia College	Women	M. E. So.	1895	21	2	7	2	16	10	1,500	600							2	30	8

[1] Laboratory, 6; nonlaboratory, 12.

[2] Laboratory, 10; nonlaboratory, 12.

[3] Laboratory, 33; nonlaboratory, 22.

[4] School of Liberal Arts.

[5] School of Natural Science.

[6] Washington College, 1808; Jefferson College, 1802; united in 1866.

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART I: *Professors and instructors*—Continued.

Location.	Institution.	For men, for women, or coeducational.	Control.	Year in which bachelor's degree was first conferred.	Professors and instructors.																
					Total number of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher (excluding honorary degrees).	Number holding doctor's degree (excluding honorary degrees).	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.	Average salary.								Number giving part time to preparatory instruction.	Average size of classes.	Eleven specified departments or fewer.
											Professors.		Associate professors.		Assistant professors.		Instructors.				
											Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
SOUTH CAROLINA—contd.																					
Columbia	University of South Carolina.	Coed	State	1807	32	6	12	9	14	12	$2,125	......	$1,500	......	$1,200	......	$500	......	0	25	11
Greenville	Furman University	Men	Bapt.	1881	11	2	3	2	15	0	1,150	......	......	......	......	......	......	......	0	20	10
Spartanburg	Converse College	Women	Nonsect.	1893	13	4	5	3	......	2	1,650	$950	......	......	......	......	......	......	0	23	10
Do	Wofford College	Men	M. E. So.	1856	13	2	5	6	15	4	2,175	......	......	......	......	......	......	......	1	32	10
SOUTH DAKOTA.																					
Vermilion	University of South Dakota.	Coed	State	1888	36	11	14	10	12	0	1,930	1,600	1,700	......	1,500	$1,225	1,150	$750	2	12	11
TENNESSEE.																					
Bristol	King College	Men	Presb.	1902	8	1	6	0	......	5	1,125	......	......	......	......	......	......	......	2	10	7
Chattanooga	University of Chattanooga.	Coed	M. E.	......	9	......	5	4	15	0	1,900	1,400	......	......	......	......	......	......	......	15	......
Greeneville	Tusculum College	Coed	Nonsect.	......	11	5	2	0	10	1	1,100	......	......	......	......	......	......	......	6	11	4
Knoxville	Knoxville College (colored).	Coed	U. Presb.	1883	8	4	4	0	18	7	1,175	800	......	......	......	......	......	......	8	......	......

Milligan	Milligan College	Coed	Chris	1882	10	2	5	0	16	0	1,200	850	......	......	......	......	......	......	2	12	6
Murfreesboro	Tennessee College	Women	Bapt	1912	6	2	3	1	16	4	1,450	1,283	......	......	......	......	......	......	14	22	..
Nashville	Fisk University (colored)	Coed	Cong	1875	32	15	4	2	..	9	1,400	670	......	......	......	......	......	......			3
Do	George Peabody College for Teachers	Coed	Nonsect	1879	100	39	38	58	..	..	......	......	......	......	......	......	......	......	......	......	4
Do	Vanderbilt University	Coed	Nonsect	1877	35	9	8	18	15	..	2,900	......	1,900	......	1,600	......	1,000	......	0	30	11
Sewanee	University of the South	Men	P. E	1874	18	3	5	9	12	3	1,900	......	1,600	......	1,200	......	900	......	0	32	11
TEXAS.																					
Austin	University of Texas	Coed	State	1885	117	14	38	59	..	..	3,050	3,000	2,283	$2,450	1,900	2,000	1,392	1,292	0	......	11
Brownwood	Howard Payne College	Coed	Bapt	1896	7	2	5	0	13	0	1,100	1,000	......	......	......	......	......	......	......	18	10
Houston	Rice Institute	Coed	Nonsect	1916	41	13	9	18	11	..	......	......	......	......	......	......	......	......	......	19	11
Sherman	Austin College	Men	Presb	1854	10	3	6	1	14	2	1,660	......	......	......	......	......	......	......	2	15	9
Waco	Baylor University	Coed	Bapt	..	66	25	10	6	15	..	......	......	......	......	......	......	......	......	......	20	11
UTAH.																					
Salt Lake City	University of Utah	Coed	State	1891	37	11	12	9	..	12	2,373	......	2,100	......	1,500	......	1,120	......	......	(1)	11
VERMONT.																					
Middlebury	Middlebury College	Coed	Nonsect	1802	30	12	14	6	12	1	1,941	......	......	......	1,531	1,300	975	......	0	18	11
Winooski	St. Michael's College	Men	R. C	1913	11	7	2	0	16	3	......	......	......	......	......	......	......	......	6	10	7
VIRGINIA.																					
Bridgewater	Bridgewater College	Coed	Breth	1891	13	5	3	3	15	0	1,094	......	......	......	750	......	620	500	2	13	7
Charlottesville	University of Virginia	Men	State	1849	59	10	13	21	..	6	......	......	......	......	......	......	......	......	0	25	11
Danville	Roanoke Institute	Women	Bapt	1886	8	5	2	1	14	8	2,000	800	......	......	......	......	......	......	......	......	..
Emory	Emory and Henry College	Men	M. E. So	..	10	2	4	4	15	..	......	......	......	......	......	......	......	......	......	......	11
Hampden-Sidney	Hampden-Sidney College	Men	Presb	1786	10	1	3	4	11	..	......	......	......	......	......	......	......	......	......	25	9
Hollins	Hollins College	Women	Nonsect	1903	12	5	3	3	12	2	......	......	......	......	......	......	......	......	......	12	8
Lexington	Washington and Lee University	Men	Nonsect	1785	28	7	4	14	10	0	2,659	......	1,536	......	......	......	515	......	0	20	11
Lynchburg	Randolph-Macon Woman's College	Women	M. E. So	1896	46	13	10	12	14	1	1,935	......	......	......	1,250	......	......	......	0	(2)	11
Richmond	Richmond College	Coed	Bapt	1849	29	4	11	14	14	1	2,000	2,000	1,500	1,500	......	......	......	......	......	33	11
Do	Virginia Union University (colored)	Coed	Bapt	1902	12	8	3	1	16	..	1,000	......	700	......	......	......	......	......	3	11	6
Williamsburg	College of William and Mary	Men	State	..	15	3	9	3	13	2	1,800	......	......	......	......	......	......	......	2	18	7
WASHINGTON.																					
Seattle	University of Washington	Coed	State	1899	124	25	33	61	11	17	2,739	2,100	2,127	......	1,800	1,612	1,345	1,160	0	23	11
Spokane	Spokane College	Coed	....	1909	6	4	......	...	30	6	1,250	800	......	......	......	......	......	......	6	10	....

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[1] Laboratory, 25; nonlaboratory, 26.

[2] Laboratory, 18$\frac{3}{8}$; nonlaboratory, 25$\frac{1}{11}$.

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART I: *Professors and instructors*—Continued.

Location.	Institution.	For men, for women, or coeducational.	Control.	Year in which bachelor's degree was first conferred.	Professors and instructors.																
					Total number of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher (excluding honorary degrees).	Number holding doctor's degree (excluding honorary degrees).	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.	Average salary.								Number giving part time to preparatory instruction.	Average size of classes.	Eleven specified departments or fewer.
											Professors.		Associate professors.		Assistant professors.		Instructors.				
											Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
WEST VIRGINIA.																					
Elkins	Davis and Elkins College	Coed	Presb.	1910	29	5	3	1	16	7	$1,050	$800	$200	$400	......	......	$1,000	......	11	12	......
WISCONSIN.																					
Appleton	Lawrence College	Coed	Nonsect.	1857	35	7	10	16	14	0	1,850	1,450	......	......	......	$1,200	......	$900	0	(1)	11
Beloit	Beloit College	Coed	Nonsect.	1851	41	5	13	22	......	6	1,852	......	1,600	......	$1,400	......	1,085	......	0	20	11
Madison	University of Wisconsin.	Coed	State	1854	283	48	94	138	10	4	3,501	......	2,525	......	1,832	1,750	1,319	1,273	7	25	11
Milton	Milton College	Coed	S. D. B.	1870	14	3	9	......	15	6	900	......	......	......	......	......	......	600	7	(2)	6
Milwaukee	Concordia College	Men	Luth.	......	9	......	......	1	26	7	1,550	......	......	......	......	......	......	......	8	33	5
Do	Marquette University	Men	R. C.	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Do	Milwaukee-Downer College.	Women.	Nonsect.	1895	35	8	8	4	15	5	......	1,600	......	......	......	1,300	......	1,075	0	16	11
Plymouth	Mission House	Coed	Ref.	......	9	......	3	2	25	9	1,050	......	......	......	......	......	......	......	0	14	......
Prairie du Chien	Campion College	Men	R. C.	1884	15	10	2	......	11	......	......	......	......	......	......	......	......	......	2	......	11
Ripon	Ripon College	Coed	Nonsect.	1866	25	15	6	4	......	......	1,400	900	......	850	......	......	......	700	0	18	11
Sinsinawa	St. Clara College and Academy.	Women.	R. C.	1904	14	7	3	1	14	......	......	......	......	......	......	......	......	......	6	(3)	6

[1] Laboratory, 22; nonlaboratory, 24.

[2] Laboratory, 7; nonlaboratory, 11.

[3] Laboratory, 8; nonlaboratory, 10.

TABLE 1.—*Colleges of arts and sciences, 1915-16.* PART II: *Students, expenditures,*

Location.	Institution.	Students, requirements, degrees, and courses.																Expenditures for 1914-15.				Receipts for 1914-15, exclusive of additions to endowments.	Debt.
		Preparatory.		Regular.		Conditioned.		Special.		Total (including professional and special departments).		High school graduates entering in 1915.		Number of standard units required for admission.	Maximum number of entrance conditions allowed.	Number of semester hours required for bachelor's degree.	Junior college. (X=Yes; O=No.)	Salaries of college teachers.	Maintenance.	Increase of plant and lasting improvements.	Administration, including handling of institution's funds.		
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.										
1	2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ALABAMA.																							
University......	University of Alabama..	0	0	337	82	18	6	11	0	685	90	109	16	14	2	120	O	$58,736	$17,905	$44,460	$13,075	$210,421	0
ARIZONA.																							
Tucson.........	University of Arizona...	0	0	209	141	0	0	60	50	269	191	65	35	15	2	127	O	61,300	48,850	10,000	9,559	423,021	0
ARKANSAS.																							
Conway........	Central College..........	0	41	0	49	0	12	0	58	0	96	0	4	14	2	65	O	3,800	1,650	1,000	4,000	29,193	$24,000
Do.........	Hendrix College.........	0	0	244	25	....	....	6	0	250	25	....	....	15	3	120	O	11,625	2,644	3,336	6,847	39,966	58,886
CALIFORNIA.																							
Claremont......	Pomona College.........	0	0	236	294	....	....	5	5	241	299	109	120	15	3	126	O	50,813	32,027	82,412	17,224	347,133	0
Los Angeles....	Occidental College.......	.....	.....	186	131	....	....	9	7	195	138	69	60	15	0	124	O	26,853	5,097	....	7,803	50,727	8,000
Mills College....	Mills College.............	.....	.....	0	115	0	27	0	45	0	220	....	....	15	3	124	O	35,067	24,795	803	8,268	80,774	0
Redlands.......	University of Redlands..	14	5	50	63	....	....	8	56	80	179	30	....	15	2	120	O	23,200	3,946	650	16,178	50,505	125,559
Santa Clara.....	University of Santa Clara	157	0	80	0	3	0	10	0	307	0	19	0	16	3	178	O	....	....	....	....	61,128	....
Stanford University.	Leland Stanford Junior University.	0	0	1,574	556	0	0	70	0	1,717	561	(471)		15	0	120	O	500,841	127,293	221,515	44,532	274,2[illegible]0	....

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART II: *Students, expenditures, and receipts*—Continued.

Location.	Institution.	Students, requirements, degrees, and courses.																Expenditures for 1914-15.				Receipts for 1914-15, exclusive of additions to endowments.	Debt.
		Preparatory.		Regular.		Conditioned.		Special.		Total (including professional and special departments).		High school graduates entering in 1915.		Number of standard units required for admission.	Maximum number of entrance conditions allowed.	Number of semester hours required for bachelor's degree.	Junior college. (X=Yes; O=No.)	Salaries of college teachers.	Maintenance.	Increase of plant and lasting improvements.	Administration, including handling of institution's funds.		
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.										
1	2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
COLORADO.																							
Boulder	University of Colorado	0	0	385	436	35	27	17	12	892	462	188	170	15	1	122	O	$96,300	$92,800	$11,500	$23,000	$300,436	0
Colorado Springs	Colorado College	0	0	142	285	17	14	14	55	318	382	67	125	15	1	120	O	58,166	395	21,233	9,890	148,305	0
University Park	University of Denver	35	27	228	276	15	20	27	14	707	397	119	133	15	1	124	O					90,000	
CONNECTICUT.																							
Hartford	Trinity Collage	0	0	230	0			5	0	235	0	85	0	14½	2	120	O	42,480	82,508	47,040	10,812	83,835	$5,000
New Haven	Yale University	0	0	1,263	0	220	0	0	0	3,083	222	408	0	14½		120	O	280,000	418,000	115,000	114,000	1,777,134	0
DISTRICT OF COLUMBIA.																							
Washington	Gallaudet College	20	18	45	28	3	2			68	48	15	11	11	1	139	O						
Do	George Washington University.	0	0	263	125	36	4	177	134	476	263	96	48	15	3	120	O	45,620	13,032	10,490	17,141	220,954	0
Do	Howard University (colored).			262	71					1,130	311	84	16	15	2	120	O	35,675	20,118	6,885	15,980	203,964	0
FLORIDA.																							

GEORGIA.																							
Athens	University of Georgia	0	0	251	0	22	0	5	0	1,402	0	75	0		2	132	O	52,050	14,125	7,100	12,628	286,303	0
Atlanta	Atlanta University (colored).	120	15	32	12	7	4	....	....	159	276	2	2	15	2	136	O	20,135	5,795	3,325	6,637	67,248	42,709
College Park	Cox College	....	....	....	....	....	....	....	....	0	182	....	....	14	2	120	O	6,284	1,800	4,000	5,000	31,000	....
Dahlonega	North Georgia Agricultural College.	100	50	83	1	0	0	20	0	203	51	....	....	14	2	....	O	18,000	1,500	2,000	1,500	38,700	....
Decatur	Agnes Scott College	....	....	0	217	0	50	0	82	0	302	0	132	15	3	120	O	25,624	6,691	....	8,109	94,711	35,150
Demorest	Piedmont College	89	84	22	23	0	0	0	0	111	107	....	....	15	4½	124	O	8,575	3,300	1,200	34,000	34,719	11,000
Forsyth	Bessie Tift College	0	64	0	109	0	25	0	32	0	346	0	70	14	2	120	O	20,000	1,000	2,000	22,000	56,000	87,000
Gainesville	Brenau College	0	0	0	149	0	11	0	49	0	375	....	....	15	3	120	O	13,460	4,274	7,360	18,873	151,860	27,000
Oxford	Emory University	0	0	145	0	63	0	36	0	244	0	70	0	14	4	134	O	26,858	3,191	700	2,167	....	65,500
Rome	Shorter College	0	56	0	115	0	10	0	35	0	216	....	....	15	3	120	O	....	....	....	....	70,560	....
IDAHO.																							
Moscow	University of Idaho	0	0	104	176	26	12	4	35	321	223	58	67	15	1	128	O	58,297	35,610	1,262	17,180	264,867	0
ILLINOIS.																							
Aurora	Aurora College	23	13	17	13	0	0	22	19	62	45	....	....	15	2	120	O	....	....	....	....	....	....
Bloomington	Illinois Wesleyan University.	26	41	108	110	16	9	....	....	250	160	....	....	15	1	128	O	15,400	8,600	2,000	12,570	49,851	0
Carlinville	Blackburn College	41	19	45	27	0	0	0	0	86	46	....	....	15	2	128	O	8,000	1,500	2,000	200	14,618	13,000
Chicago	De Paul University	220	125	24	229	1	1	11	94	523	528	23	165	15	1	130	O	....	3,189	....	....	53,434	....
Do	Loyola University	771	0	121	0	0	0	0	0	1,347	0	111	0	16	1	140	O	....	....	....	....	....	....
Decatur	James Millikin University.	30	36	114	159	9	6	8	40	247	523	66	93	15	1	130	O	41,157	6,822	2,916	10,798	96,588	0
Galesburg	Knox College	....	....	200	176	15	7	17	22	278	436	116	93	15	1½	120	O	30,653	16,059	....	7,814	71,155	89,000
Jacksonville	Illinois Woman's College	0	62	0	162	0	0	0	14	0	238	0	85	15	1	120	O	21,032	18,795	5,724	16,021	104,984	0
Lake Forest	Lake Forest College	0	0	99	89	1	3	2	0	102	92	38	41	16	3	124	O	36,400	43,458	14,854	5,535	216,153	0
Mount Carroll	Frances Shimer School	0	81	0	33	0	0	0	0	0	114	0	15	15	1	60	X	12,000	3,675	460	2,350	43,823	30,000
Naperville	Northwestern College	56	18	158	82	0	0	2	9	256	200	60	49	15	1	128	O	16,000	3,910	2,482	2,353	40,082	55,000
Rockford	Rockford College	0	0	0	122	0	56	0	39	0	217	0	110	15	2	120	O	19,268	17,225	2,306	13,858	92,189	13.000
Rock Island	Augustana College	85	59	124	52	0	0	12	9	221	120	77	30	15	1	120	O	21,809	8,635	7,200	5,052	99,914	69,075
INDIANA.																							
Bloomington	Indiana University	0	0	1,330	799	0	0	173	968	2,091	1,062	....	....	16	0	121	O	241,311	91,935	89,844	33,984	615,000	0
Crawfordsville	Wabash College	0	0	319	0	2	0	13	0	334	0	119	0	16	1½	128	O	35,641	4,957	1,290	3,567	58,437	0
Earlham	Earlham College	0	0	139	163	22	16	9	23	180	251	7	4	15	..	120	O	36,662	12,922	6,477	17,000	127,551	....
Franklin	Franklin College	....	....	117	119	2	2	4	10	123	131	55	58	16	..	128	O	14,206	12,168	....	6,052	48,253	0
Greencastle	De Pauw University	....	....	361	356	1	5	5	17	398	594	65	61	15	1	120	O	54,261	15,257	80,757	14,950	127,726	0
Indianapolis	Butler College	0	0	111	194	49	40	8	15	168	249	71	94	15	3	120	O	30,085	3,010	....	7,582	45,314	....
Notre Dame	University of Notre Dame.	495	0	254	0	8	0	12	0	1,158	0	250	0	16	3	128	O	31,750	28,650	15,000	....	....	0
Upland	Taylor University	88	37	65	44	....	....	3	5	163	87	28	15	15	2	186	O	5,800	2,182	18,850	1,675	47,135	34,500

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART II: *Students, expenditures, and receipts*—Continued.

Location.	Institution.	Students, requirements, degrees, and courses.																Expenditures for 1914-15.				Receipts for 1914-15, exclusive of additions to endowments.	Debt.
		Preparatory.		Regular.		Conditioned.		Special.		Total (including professional and special departments).		High school graduates entering in 1915.		Number of standard units required for admission.	Maximum number of entrance conditions allowed.	Number of semester hours required for bachelor's degree.	Junior college. (X=Yes; O=No.)	Salaries of college teachers.	Maintenance.	Increase of plant and lasting improvements.	Administration, including handling of institution's funds.		
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.										
1	2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
IOWA.																							
Cedar Falls	Iowa State Teachers College.	.....	.....	231	1,561	.....	.....	9	18	242	1,624	.....	.....	15	1½	120	O	$147,296	$56,627	$85,075	$22,346	$331,865	0
Cedar Rapids	Coe College	22	4	218	248	10	1	2	8	274	367	100	100	15	1	124	O	29,734	4,140	67,350	6,800	63,452	$260,000
Clinton	Wartburg College	46	0	28	0	0	0	0	0	74	0	.....	.....	15	.....	.....	.....	.....	.....	.....	.....	19,797	.....
Des Moines	Des Moines College	27	43	96	129	0	0	0	0	148	206	30	44	15	1½	120	O	12,000	5,600	.....	3,000	56,229	80,000
Do	Drake University	0	0	220	190	10	0	30	42	508	1,014	81	42	15	1	120	O	40,000	19,560	5,000	10,000	189,718	283,000
Fairfield	Parsons College	25	15	78	68	3	6	0	0	106	89	42	24	15	1	120	O	12,500	4,908	21,318	4,718	40,902	61,875
Iowa City	State University of Iowa.	0	0	676	674	101	45	35	46	1,767	882	316	300	15	1	120	O	193,528	174,626	284,956	28,313	986,513	0
Mount Vernon	Cornell College	42	44	234	310	0	0	0	0	369	553	98	106	15	1	124	O	32,050	568	2,726	10,393	132,079	0
Pella	Central University of Iowa.	18	5	29	31	0	0	0	2	69	78	8	12	15	.....	128	O	10,365	2,003	800	1,500	18,850	6,744
Sioux City	Morningside College	51	39	155	221	.....	.....	2	23	274	525	65	90	15	2	120	O	20,600	6,585	3,725	6,000	46,344	.....
Storm Lake	Buena Vista College	8	9	27	34	2	2	0	0	37	45	9	13	15	.....	120	O	8,350	1,939	.....	3,000	20,072	50,000
KANSAS.																							
Atchison	Midland College	30	24	35	39	2	1	8	15	104	134	15	12	15	1	120	O	12,200	2,400	38,000	2,500	25,000	1,200
Emporia	College of Emporia	0	0	117	120	2	0	1	3	133	211	53	57	15	1	120	O	22,820	16,266	2,903	4,135	39,549	61,635
Ottawa	Ottawa University	51	41	94	103	0	0	0	7	145	151	43	38	15	1	120	O	12,912	4,260	35,000	3,489	38,978	38,900
Salina	Kansas Wesleyan University.	36	34	84	90	0	0	0	0	138	207	31	47	15	1	120	O	14,200	3,000	2,000	250	20,045	19,000

Sterling	Cooper College	4	0	55	54	0	0	5	2	126	206	15	15	15	2	122	O	11,468	965	....	....	21,453	8,000
Topeka	Washburn College	38	46	165	177	12	7	19	41	371	507	73	88	15	1	120	O	23,839	11,141	....	8,608	78,753	60,000
Winfield	Southwestern College	20	15	130	98	0	0	22	26	214	211	....	....	15	1	120	O	10,575	....	....	5,792	43,615	....
KENTUCKY.																							
Bowling Green	Ogden College	75	0	50	0	0	0	5	0	75	0	15	0	15	2	120	O	6,000	1,600	200	12,000	11,018	0
Danville	Centre College	40	0	147	0	0	0	0	0	187	0	....	....	15	2	128	O	19,000	6,200	3,500	3,000	....	....
Georgetown	Georgetown College	38	36	135	92	7	4	15	13	198	174	(91)		15	3	128	O	12,450	4,450	0	5,900	41,212	22,000
Lexington	University of Kentucky	555	60	154	127	3	4	5	25	717	226	....	....	15	2	120	O	9,175	11,268	5,000	11,620	321,062	30,552
Do	Transylvania College	0	0	141	79	13	2	9	7	163	88	62	41	15	2	120	O	12,200	5,926	30,257	4,154	48,529	....
Louisville	University of Louisville	0	0	97	136	7	9	25	28	353	282	62	69	16	2	120	O	33,018	5,281	0	1,360	79,250	0
Russellville	Bethel College	....	....	28	0	2	0	0	0	30	0	16	0	15	2	130	O	4,177	428	1,563	1,542	12,490	8,569
LOUISIANA.																							
New Orleans	H. Sophie Newcomb Memorial College.	0	0	0	218	0	42	0	13	4	553	0	107	15	2	122	O	53,270	11,469	3,706	9,095	166,936	0
Do	Loyola University	0	0	27	0	1	0	17	0	227	0	21	0	15	3	144	O	....	....	....	....	....	....
MAINE.																							
Brunswick	Bowdoin College	0	0	400	0	0	0	0	0	460	0	123	0	14½	2	117	O	65,101	42,588	9,476	6,850	151,563	0
Lewiston	Bates College	0	0	234	184	18	4	32	0	284	188	105	58	14½	4	122	O	44,896	21,718	0	9,371	89,809	3,500
Orono	University of Maine	0	0	177	81	0	0	8	0	662	82	57	23	14½	2	125	O	134,097	46,895	59,648	11,308	364,052	108,842
MARYLAND.																							
Annapolis	St. John's College	....	....	127	0	20	0	13	0	160	0	24	0	14	2	144	O	17,000	5,084	2,113	750	53,000	0
Baltimore	Goucher College	0	0	0	379	0	97	0	32	0	508	0	204	15	3	120	O	44,741	28,423	118,004	11,520	212,569	0
Do	Johns Hopkins University.	0	0	133	0	42	0	20	0	324	0	....	....	15	....	125	O	353,933	210,310	501,786	20,817	628,830	0
Do	Morgan College (colored)	40	25	27	15	0	0	0	7	67	47	2	5	16	2	128	O	6,675	2,318	1,845	1,900	34,213	25,000
Chestertown	Washington College	30	6	82	7	0	0	0	0	112	13	32	3	14	2	124	O	13,000	4,200	0	700	62,795	5,000
Ellicott City	Rock Hill College	80	0	40	0	4	0	0	0	120	0	14	0	14	2	....	O	0	3,600	2,000	24,000	26,000	0
Frederick	Hood College	....	....	0	99	0	0	0	29	0	128	....	....	15	2	120	O	18,075	3,762	75,029	1,605	71,840	111,700
Lutherville	Maryland College for Women	0	4	0	77	0	7	0	5	0	93	0	38	13½	2	....	O	8,100	3,532	3,500	....	....	40,000
MASSACHUSETTS.																							
Amherst	Amherst College	0	0	391	0	0	0	31	0	422	0	....	....	14	2½	129	O	....	....	....	....	221,817	....
Boston	Boston University	0	0	80	300	26	68	24	48	104	348	62	169	15	3	120	O	48,333	5,535	3,144	2,612	222,474	....
Cambridge	Harvard University	....	....	....	....	....	....	....	....	....	....	....	....	16½	2	....	O	550,723	....	442,784	92,683	3,019,602	0
Northampton	Smith College	0	0	0	1,725	0	135	0	0	0	1,725	0	333	14½	2	120	O	229,159	116,418	42,739	37,057	736,734	....
Norton	Wheaton College	0	0	0	167	0	0	0	39	0	206	....	....	15	2	118	O	24,476	28,671	1,200	8,240	119,676	0
South Hadley	Mount Holyoke College	0	0	0	781	0	0	0	2	0	783	0	229	15	....	120	O	105,877	30,024	....	233,083	336,998	....
Tufts College	Tufts College	0	0	180	96	26	0	10	0	1,410	131	75	0	15	2½	122	O	....	....	....	....	301,955	0
Worcester	Clark College	0	0	166	0	0	0	11	0	177	0	....	....	15	0	108	O	43,700	33,200	0	6,680	85,250	0
MICHIGAN.																							
Alma	Alma College	0	0	87	86	0	0	1	4	88	90	30	32	15	2	120	O	17,861	8,579	200	2,800	54,673	66,310
Ann Arbor	University of Michigan	0	0	2,067	928	0	0	31	199	5,025	1,259	....	....	15	0	120	O	326,906	223,425	472,747	126,651	2,321,241	0

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART II: *Students, expenditures, and receipts*—Continued.

Location.	Institution.	Students, requirements, degrees, and courses.																Expenditures for 1914-15.				Receipts for 1914-15, exclusive of additions to endowments.	Debt.
		Preparatory.		Regular.		Conditioned.		Special.		Total (including professional and special departments).		High school graduates entering in 1915.		Number of standard units required for admission.	Maximum number of entrance conditions allowed.	Number of semester hours required for bachelor's degree.	Junior college. (X=Yes; O=No.)	Salaries of college teachers.	Maintenance.	Increase of plant and lasting improvements.	Administration, including handling of institution's funds.		
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.										
1	2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
MINNESOTA.																							
Collegeville	St. John's University	....	....	....	....	....	....	....	....	....	....	....	....	16	....	128	O	....	....	....	....	....	....
Minneapolis	Augsburg Seminary	93	0	31	0	0	0	0	0	123	0	4	0	15	....	144	O	15,209	$1,016	$927	$1,500	$21,007	$15,000
Northfield	Carleton College	0	0	211	235	0	0	0	0	219	266	81	85	15	0	120	O	53,698	25,217	95,350	13,945	204,584	51,161
St. Paul	Hamline University	0	0	222	194	0	0	2	0	224	194	108	85	15	3	120	O	30,350	13,750	7,000	8,415	63,264	0
Do	Macalester College	3	8	158	135	1	2	0	0	177	184	60	63	15	1½	127	O	24,554	5,922	665	5,846	55,796	0
Do	College of St. Catherine	0	130	0	125	0	8	0	8	0	351	0	63	15	....	120	O	35,000	12,847	53,000	10,000	....	120,000
St. Peter	Gustavus Adolphus College.	21	23	102	64	0	0	2	0	183	187	28	24	15	1	130	O	13,938	....	1,682	2,760	42,295	35,000
Winona	College of St. Teresa	0	100	0	140	0	0	0	0	0	240	....	....	16	....	120	O	15,000	....	....	....	72,500	200,000
MISSISSIPPI.																							
Clinton	Mississippi College	56	0	314	0	10	0	0	0	425	0	....	....	14	2	64	O	....	....	....	....	60,293	....
Meridian	Meridian College	13	19	75	150	0	0	29	78	155	500	....	....	14	2	120	O	....	....	....	....	....	....
University	University of Mississippi	....	....	269	75	26	3	34	6	547	84	....	....	14	2	130	O	40,000	17,800	13,000	9,000	....	23,000
MISSOURI.																							
Columbia	Stephens College	0	18	0	127	0	0	0	0	0	297	0	74	15	1	60	X	9,786	2,795	4,238	4,411	49,000	20,000
Fulton	Westminster College	43	0	106	0	0	0	13	0	162	0	49	0	15	1	132	O	12,610	3,139	0	3,030	....	31,300
Liberty	William Jewell College	190	0	279	0	0	0	0	0	469	0	....	....	15	2	124	O	21,491	8,114	50,338	8,015	84,047	44,000
Parkville	Park College	96	70	215	212	9	10	0	0	236	258	55	56	15	2	140	O	23,350	6,740	2,328	....	91,708	9

St. Charles	Lindenwood Female College.	0	86	0	43	0	3	0	40	0	172	0	60	15	2	60	X	7,500	4,863	100,000	550	128,307	0
St. Louis	Forest Park College	0	45	0	30	0	0	0	0	0	175	0	30	15	1	120	O	....	....	....	....	....	....
Do	St. Louis University	397	0	223	0	0	0	0	0	1,546	0	109	0	16	2	136	O	....	....	....	....	....	....
Do	Washington University	0	0	139	211	27	33	36	26	873	439	89	113	15	1	120	O	260,448	212,709	185,049	17,839	716,471	....
Springfield	Drury College	0	0	129	131	5	2	6	14	152	160	66	63	15	1	124	O	26,225	10,715	0	5,225	54,084	0
Warrenton	Central Wesleyan College	101	108	59	32	0	0	1	3	235	214	18	15	16	2	128	O	8,750	3,550	1,000	2,000	24,607	39,000
MONTANA.																							
Missoula	University of Montana	0	0	128	202	3	4	18	32	323	291	61	83	15	2	122	O	64,995	43,433	2,261	16,925	215,945	....
NEBRASKA.																							
Bellevue	Bellevue College	34	29	29	33	0	0	1	4	65	77	29	33	15	1	128	O	11,500	5,550	23,500	7,000	36,155	24,000
College View	Union College	82	79	64	51	0	0	0	0	100	133	36	39	16	0	160	O	8,381	2,816	....	12,596	66,159	0
Crete	Doane College	2	1	63	51	3	7	4	5	80	97	31	27	15	3	124	O	17,670	5,912	15	3,742	45,448	40,765
Lincoln	University of Nebraska	......	...	838	755	55	41	47	130	1,859	1,206	371	292	15	1	125	O	250,578	97,320	10,000	106,807	1,368,039	0
NEW HAMPSHIRE.																							
Durham	New Hampshire College of Agriculture and Mechanic Arts.	0	0	79	102	41	18	4	3	123	113	36	45	15	.....	132	O	64,500	7,870	27,000	12,000	273,236	0
NEW JERSEY.																							
Convent Station	College of St. Elizabeth	0	200	0	101	0	5	0	4	0	395	0	42	15	2	132	O	10,000	10,940	100,000	....	48,675	....
Kenilworth	Upsala College	34	3	7	5	0	0	1	1	59	40	2	2	15	2	125	O	8,861	2,011	2,875	1,211	13,158	21,620
NEW MEXICO.																							
Albuquerque	University of New Mexico.	10	4	67	51	0	0	14	15	130	84	33	24	15	2	120	O	35,450	9,950	7,000	800	62,577	0
NEW YORK.																							
Albany	New York State College for Teachers.	80	138	115	647	0	0	49	208	257	1,038	55	260	15	1	124	O	9,432	19,185	2,000	5,700	110,103	0
Alfred	Alfred University	0	0	50	64	18	13	8	6	76	83	27	27	15	2	128	O	21,787	8,659	1,050	6,724	36,307	0
Annandale	St. Stephen's College	10	0	39	0	0	0	13	0	62	0	5	0	14½	2½	128	O	17,000	2,250	35,000	35,000	40,546	40,000
Aurora	Wells College	0	0	0	201	0	15	0	1	0	228	0	78	14½	2	115	O	40,289	37,099	2,802	10,213	146,774	40,000
Canton	St. Lawrence University	0	0	129	128	0	0	3	9	132	137	45	29	15	2	120	O	23,789	2,802	0	3,711	236,341	2,000
Elmira	Elmira College	0	0	0	278	0	0	0	0	0	278	0	93	15	1	120	O	32,733	6,585	2,808	....	104,543	0
Geneva	Hobart College	0	0	120	94	16	2	0	0	136	96	57	28	14½	2	120	O	35,500	10,200	2,000	15,000	125,890	0
New Rochelle	College of New Rochelle	0	0	0	185	0	6	0	2	0	200	0	60	16	2	144	O	7,536	62,748	....	....	70,289	52,122
New York	Barnard College	0	0	0	565	0	68	0	61	0	694	0	190	15	.....	124	O	130,330	52,831	....	15,211	262,423	0
Do	College of the City of New York.	1,621	0	1,811	0	323	0	95	0	3,850	0	546	0	15	2	128	O	319,324	108,194	55,988	17,336	526,108	0
Do	Columbia University	0	0	1,177	0	0	0	79	0	.....	0	357	0	14½	2½	120	O	1,252,658	482,517	25,345	1,407,745	4,204,937	0
Do	Hunter College of the City of New York.	0	0	0	1,943	0	0	0	0	0	1,943	0	405	15	1	120	O	287,546	30,949	....	51,390	550,124	0
Do	New York University	0	0	272	0	0	0	6	0	278	0	77	0	15	3	126	O	52,261	29,870	17,556	1,893	630,415	645,000

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART II: *Students, expenditures, and receipts*—Continued.

Location.	Institution.	Students, requirements, degrees, and courses.																Expenditures for 1914-15.				Receipts for 1914-15, exclusive of additions to endowments.	Debt.
		Preparatory.		Regular.		Conditioned.		Special.		Total (including professional and special departments).		High school graduates entering in 1915.		Number of standard units required for admission.	Maximum number of entrance conditions allowed.	Number of semester hours required for bachelor's degree.	Junior college. (X=Yes; O=No.)	Salaries of college teachers.	Maintenance.	Increase of plant and lasting improvements.	Administration, including handling of institution's funds.		
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.										
1	2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
NEW YORK—continued.																							
Poughkeepsie	Vassar College	0	0	0	1,127	0	0	0	0	0	1,127	0	319	15½	2	120	O	$181,498	$41,687	$104,590	$36,745	$779,460	....
Rochester	University of Rochester	0	0	271	187	18	21	17	16	306	224	101	71	15	.....	184	O	78,232	25,278	68,924	22,959	139,996	....
Schenectady	Union University	0	0	470	0	51	0	0	0	521	0	175	0	14	2	.....	O	65,379	20,802	2,536	8,691	140,117	0
NORTH CAROLINA.																							
Chapel Hill	University of North Carolina.	0	0	441	2	71	0	32	3	738	5	146	0	14	2	120	O	75,629	28,795	30,000	9,430	261,658	0
Davidson	Davidson College	0	0	357	0	0	0	0	0	357	0	.....	.....	14	2	65	O	27,185	5,525	500	6,000	51,830	0
Durham	Trinity College	0	0	424	89	95	13	4	0	441	89	.....	.....	14	2	122	O	63,141	8,870	....	12,498	126,304	0
Elon College	Elon College	44	28	187	93	.....	.....	12	9	315	240	88	51	14	2	128	O	15,800	7,707	2,640	3,050	54,986	$52,515
Guilford College	Guilford College	3	33	80	48	10	12	4	3	132	91	25	14	14	2	126	O	12,150	1,850	....	1,200	43,600	60,000
Raleigh	Shaw University (colored).	103	130	39	9	88	110	25	35	113	260	3	0	15	2	.....	O	....	....	....	....	37,257	....
Weaverville	Weaver College	40	19	27	6	0	0	0	0	67	25	.....	.....	14	.....	.....	X	4,800	897	....	....	273,287	13,200
Winston-Salem	Salem Academy and College.	0	140	0	127	0	20	0	42	0	421	0	48	14	2	120	O	19,370	11,959	....	2,778	113,367	0

NORTH DAKOTA.																							
University	University of North Dakota.	60	57	138	88	11	4	17	24	480	392	78	40	15		.....	O	115,200	47,263	....	20,081	268,497	38,500
OHIO.																							
Akron	Municipal University of Akron.	0	0	127	58	10	1	6	14	143	73	49	18	15	1	128	O	28,128	12,127	2,480	6,949	65,833	5,346
Athens	Ohio University	0	0	320	123	15	6	66	90	401	219	87	33	15	1	120	O	36,150	20,251	17,993	18,380	419,250	0
Berea	Baldwin-Wallace College	186	17	126	94	....	....	10	14	633	205	35	39	15	2	120	O	24,341	5,976	....	2,417	46,447	52,650
Bluffton	Bluffton College	24	24	45	56	....	....	7	8	155	179	21	31	15	..	120	O	20,720	1,200	....	....	10,456	70,000
Cedarville	Cedarville College	.....	.....	26	28	10	4	....	....	39	63	8	10	16	..	120	O	6,168	1,172	....	938	7,708	....
Cincinnati	University of Cincinnati.	0	0	292	533	0	0	209	347	1,247	1,225	....	....	16	2	124	O	124,605	71,508	42,122	44,714	867,985	....
Cleveland	Western Reserve University.	0	0	398	418	15	19	10	17	441	565	....	....	15	2	124	O	138,922	15,487	....	....	438,278	0
Columbus	Capital University	95	0	97	0	9	0	12	0	213	0	34	0	15	2	140	O	17,450	1,557	30,590	2,200	24,883	....
Dayton	St. Mary College	.....	.....	70	0	0	0	0	0	100	0	23	0	15	..	120	O	....	....	....	....	....	....
Defiance	Defiance College	34	28	95	116	4	0	0	0	164	231	30	45	15		120	O	15,259	1,534	9,892	12,903	41,688	20,000
Delaware	Ohio Wesleyan University.	21	7	474	406	27	13	44	45	573	597	148	143	15	2	120	O	66,777	28,529	5,300	16,148	145,300	....
Gambier	Kenyon College	0	0	131	0	11	0	8	0	151	0	52	0	15	2	128	O	21,688	10,919	2,368	4,750	66,841	18,000
Marietta	Marietta College	0	0	182	54	2	0	2	15	186	69	76	21	15	0	128	O	22,795	5,052	1,505	7,000	42,929	0
New Concord	Muskingum College	70	87	150	108	0	0	0	0	416	242	50	31	15	2	128	O	10,061	5,043	9,358	5,813	50,016	97,000
Oxford	Miami University	0	0	336	169	0	0	3	1	361	429	....	....	15		120	O	53,050	25,704	26,837	9,217	326,734	0
Do	Oxford College for Women.	0	0	0	125	0	3	0	2	0	246	0	60	15		124	O	12,000	4,902	1,500	7,438	52,127	15,155
Do	Western College for Women.	0	0	0	263	0	0	0	0	0	263	0	103	15		120	O	26,752	11,744	8,795	8,850	112,384	....
Painesville	Lake Erie College	0	0	0	139	0	0	0	1	0	150	0	54	15	1	120	O	25,220	9,392	6,336	12,337	76,189	15,000
Rio Grande	Rio Grande College	95	73	30	25	0	0	0	0	130	128	....	....	15	..	120	O	4,000	1,150	1,500	1,000	8,200	3,000
Westerville	Otterbein University	33	20	154	105	10	5	0	2	233	271	45	90	15	..	128	O	19,470	7,584	750	3,824	59,196	36,770
Wooster	College of Wooster	121	96	278	201	18	14	3	3	464	401	115	78	15		124	O	50,971	22,018	45,970	10,045	15,172	3,434
OKLAHOMA.																							
Guthrie	Methodist University of Oklahoma.	25	18	31	15	2	0	3	13	102	131	14	6	15	2	120	O	10,000	1,810	50	3,215	14,315	4,000
Kingfisher	Kingfisher College	.....	.....	22	16	2	0	1	0	25	16	6	2	15	1	128	O	9,600	2,435	1,688	511	17,268	....
Norman	University of Oklahoma.	0	0	566	351	0	0	126	187	1,062	615	....	....	15		124	O	72,451	59,210	7,728	35,306	231,147	0
OREGON.																							
Albany	Albany College	7	13	29	27	0	0	2	4	43	98	17	15	15	2	120	O	11,450	3,395	400	3,409	22,225	54,000
Forest Grove	Pacific University	0	0	48	44	3	4	3	5	62	130	17	22	15	1	120	O	11,270	5,542	1,564	4,852	31,802	45,000
McMinnville	McMinnville College	64	32	44	30	6	6	0	4	132	125	23	16	15	1	160	O	13,975	1,328	....	7,020	27,247	30,664
Newberg	Pacific College	22	20	22	17	0	0	0	9	52	94	9	17	15	..	135	O	8,750	1,050	1,000	3,482	7,500	21,570
Portland	Reed College	0	0	110	147	0	0	0	0	110	147	....	....	15	0	.....	O	44,325	17,200	....	6,000	122,859	0
Salem	Willamette University	34	12	100	115	0	0	12	3	192	194	44	48	15	2	124	O	12,000	3,875	900	5,540	39,080	28,000
PENNSYLVANIA.																							
Bethlehem	Moravian College	.....	.....	31	0	0	0	0	0	34	0	9	0	17½	2	120	O	9,500	1,435	3,000	....	83,402	0
Bryn Mawr	Bryn Mawr College	.....	.....	0	451	0	57	0	2	0	453	....	....	20	5	120	O	110,135	60,940	17,327	28,653	380,562	51,265

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART II: *Students, expenditures, and receipts*—Continued.

Location.	Institution.	Students, requirements, degrees, and courses.																Expenditures for 1914–15.				Receipts for 1914–15, exclusive of additions to endowments.	Debt.
		Preparatory.		Regular.		Conditioned.		Special.		Total (including professional and special departments).		High school graduates entering in 1915.		Number of standard units required for admission.	Maximum number of entrance conditions allowed.	Number of semester hours required for bachelor's degree.	Junior college. (X=Yes; O=No.)	Salaries of college teachers.	Maintenance.	Increase of plant and lasting improvements.	Administration, including handling of institution's funds.		
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.										
1	2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
PENNSYLVANIA—contd.																							
Beaver	Beaver College	0	21	0	37	0	0	0	13	0	120	....	....	15	.....	120	O	$9,354	....	....	$3,408	$24,667	....
Chambersburg	Wilson College	0	0	0	162	0	0	0	10	0	195	0	52	14½	2	120	O	13,350	$1,501	$4,189	8,370	65,416	$13,000
Easton	Lafayette College	0	0	472	0	0	0	5	0	477	0	....	....	14½	2	130	O	80,037	42,895	6,051	5,070	130,484	126,232
Gettysburg	Pennsylvania College	74	6	280	14	12	1	33	1	399	22	112	2	15	2	128	O	26,350	15,399	3,000	5,760	65,000	0
Haverford	Haverford College	0	0	161	0	6	0	19	0	186	0	51	0	14½	3	130	O	56,350	17,500	14,000	9,950	160,588	96,578
Lancaster	Franklin and Marshall College.	0	0	291	0	12	0	16	0	291	0	67	0	14½	2	130	O	29,184	6,354	2,900	6,631	47,705	0
Lincoln University.	Lincoln University (colored).	0	0	143	0	0	0	20	0	212	0	57	0	15	0	120	O	10,766	5,130	....	1,462	35,951	21,709
Meadville	Allegheny College	0	0	230	163	0	0	11	1	241	164	84	54	15	2	120	O	40,283	31,033	8,609	8,527	102,568	11,882
Mechanicsburg	Irving Female College	0	6	0	31	0	0	0	0	0	107	....	....	13	3	140	O	10,820	1,550	500	1,000	35,541	....
Myerstown	Albright College	18	8	96	25	25	3	10	0	160	78	15	7	16	.....	134	O	12,500	6,030	3,352	2,200	41,487	0
New Wilmington.	Westminster College	4	2	97	84	2	0	9	0	112	86	34	26	15	1	120	O	29,477	17,458	29,352	....	69,914	80,000
Philadelphia	Drexel Institute	41	0	148	391	3	3	2	0	191	391	26	177	14½	2½	.....	O	....	....	....	....	95,138	....
Do	University of Pennsylvania.	0	0	635	380	0	0	3	0	4,339	870	....	....	15	2	128	O	256,250	119,884	476,118	599,735	1,738,088	0
Selinsgrove	Susquehanna University	54	18	110	15	8	7	10	6	192	111	37	5	14	5	120	O	18,000	7,400	6,000	4,000	31,600	50,000
State College	Pennsylvania State College.	.....	.....	144	29	0	0	8	11	152	40	51	10	14	0	136	O	408,059	70,877	228,576	50,502	941,309	....
		.....	.....	179	2	0	0	1	0	180	2	179	2	14	0	160	O						
Swarthmore	Swarthmore College	0	0	125	230	0	0	1	5	214	237	46	70	14½	2	124	O	70,400	52,485	10,038	17,602	227,009	0

Washington....	Washington and Jefferson College.	0	0	311	0	15	0	7	0	333	0	....	....	14½	2	124	O	[illegible]	[illegible]	....	[illegible]	[illegible]	[illegible]
Waynesburg....	Waynesburg College.....	0	0	49	55	0	0	0	0	49	132	17	17	15	....	136	O	9,000	600	....	2,250	20,685	2,000
SOUTH CAROLINA.																							
Charleston......	College of Charleston....	0	0	69	0	7	0	4	0	80	0	29	0	14	2	122	O	12,100	3,882	2,000	1,500	22,102	0
College Place...	Columbia College.........	0	4	0	123	0	0	0	100	0	392	0	70	14	2	....	O	....	....	....	....	....	....
Columbia.......	University of South Carolina.	0	0	281	14	9	0	42	18	507	32	124	11	11	1	138	O	57,234	17,051	13,000	30,200	142,227	0
Greenville......	Furman University.....	0	0	192	0	0	0	13	0	205	0	....	....	12	0	130	O	....	....	....	....	49,447	....
Spartanburg....	Converse College........	0	0	0	153	0	0	0	50	0	406	....	....	14½	2	120	O	17,207	10,576	4,000	5,457	74,567	0
Do........	Wofford College..........	0	0	288	0	32	0	4	0	324	0	86	0	14	2	132	O	23,213	5,256	....	3,375	39,578	42,486
SOUTH DAKOTA.																							
Vermilion......	University of South Dakota.	0	0	126	152	0	0	24	71	315	289	36	63	15	2	128	O	73,086	89,970	....	7,920	194,772	0
TENNESSEE.																							
Bristol.........	King College............	....	....	....	....	....	....	....	....	....	....	....	....	14	2	124	....	....	....	....	....	....	....
Chattanooga....	University of Chattanooga.	0	0	94	60	0	0	14	17	108	77	....	....	14½	....	120	O	17,200	....	63,345	5,500	49,917	22,000
Greeneville.....	Tusculum College.......	75	44	31	31	11	0	3	17	134	148	....	....	15	2	128	O	7,775	5,958	28,618	4,624	64,011	0
Knoxville......	Knoxville College (colored).	96	74	26	14	0	0	0	1	130	167	18	8	15	2	125		22,689	4,605	4,118	2,314	41,588	10,366
Milligan........	Milligan College.........	45	14	98	42	0	0	0	0	149	52	12	10	15	....	128		6,000	1,200	500	12,500	....	7,000
Murfreesboro...	Tennessee College.......	0	104	0	53	0	24	0	17	0	304	0	48	14	2	120	O	7,975	1,549	....	12,178	52,536	23,077
Nashville.......	Fisk University (colored)	93	84	83	90	12	13	11	10	213	324	12	12	15	1	140	O	16,517	9,016	1,025	8,069	54,242	0
Do........	George Peabody College for Teachers.	0	0	413	1,009	....	....	....	....	413	1,099	....	....	....	....	186	O	78,930	15,664	1,352,646	13,328	169,243	0
Do........	Vanderbilt University..	0	0	250	62	36	18	10	10	80	72	131	27	14	2	128	O	58,000	9,300	9,000	109,000	268,292	0
Sewanee........	University of the South.	0	0	160	0	0	0	0	0	180	0	....	....	14	2	140	O	20,229	1,869	30,024	9,838	131,736	325,416
TEXAS.																							
Austin..........	University of Texas.....	0	0	674	677	126	82	82	52	1,682	1,201	275	237	14	2	120	O	239,107	47,748	13,271	31,373	602,609	0
Brownwood....	Howard Payne College..	90	54	62	36	0	0	3	13	165	139	21	19	14	2	120	O	10,500	6,000	....	....	22,000	50,000
Houston........	Rice Institute...........	0	0	264	119	0	0	0	0	264	119	....	....	14	2	120	O	54,108	34,534	300,790	27,035	529,000	0
Sherman.......	Austin College..........	37	0	108	0	0	0	2	0	145	0	36	0	14	2	122	O	15,100	3,600	50,000	....	82,880	100,000
Waco...........	Baylor University......	....	....	232	197	88	52	23	19	410	378	....	....	14	2	120	O	37,642	19,002	....	15,181	148,919	42,940
UTAH.																							
Salt Lake City..	University of Utah......	44	76	459	469	305	369	0	0	808	914	....	....	15	2	122	O	175,135	49,457	1,250	9,300	241,919	0
VERMONT.																							
Middlebury....	Middlebury College.....	0	0	187	156	0	0	0	0	187	156	67	50	14	2	120	O	43,447	8,610	34,838	10,965	126,925	0
Winooski.......	St. Michael's College....	80	0	20	0	0	0	0	0	115	0	4	0	15	3	140	O	....	....	....	....	....	....

TABLE 1.—*Colleges of arts and sciences, 1915–16.* PART II: *Students, expenditures, and receipts*—Continued.

Location.	Institution.	Students, requirements, degrees, and courses.																Expenditures for 1914–15.				Receipts for 1914–15, exclusive of additions to endowments.	Debt.
		Preparatory.		Regular.		Conditioned.		Special.		Total (including professional and special departments).		High school graduates entering in 1915.		Number of standard units required for admission.	Maximum number of entrance conditions allowed.	Number of semester hours required for bachelor's degree.	Junior college. (X=Yes; O=No.)	Salaries of college teachers.	Maintenance.	Increase of plant and lasting improvements.	Administration, including handling of institution's funds.		
		Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.										
1	2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
VIRGINIA.																							
Bridgewater	Bridgewater College	40	22	41	28	0	0	0	0	84	75	8	11	14	2	120	O	$7,200	$1,691	$1,567	....	$22,450	0
Charlottesville	University of Virginia	0	0	468	0	0	0	55	0	523	0	148	0	14	2	120	O	98,406	53,302	70,000	$33,241	444,315	$200,000
Danville	Roanoke Institute	0	100	0	26	0	5	0	0	0	188	0	8	15	2½	.....	X	....	....	....	....	....	....
Emory	Emory and Henry College.	62	0	176	0	0	0	0	0	238	0	....	....	14	2	128	O	....	....	....	....	53,254	....
Hampden-Sidney.	Hampden-Sidney College.	0	0	102	0	15	0	1	0	118	0	38	0	14	2	120	O	12,375	4,683	945	2,789	25,712	0
Hollins	Hollins College	0	84	0	106	0	0	0	28	0	218	0	45	14	2	120	O	11,450	8,753	28,946	926	107,489	....
Lexington	Washington and Lee University.	0	0	331	0	24	0	14	0	511	0	116	0	14	2	126	O	39,801	16,271	44,683	16,292	104,759	0
Lynchburg	Randolph-Macon Woman's College.	0	0	0	503	0	84	0	121	0	632	0	241	15	2	120	O	53,735	12,965	2,636	9,737	202,900	42,000
Richmond	Richmond College	0	0	211	76	37	38	20	3	268	131	77	45	15	3	120	O	53,199	....	....	9,357	....	....
Do	Virginia Union University (colored).	228	0	59	6	5	0	3	1	62	7	22	5	15	2	160	O	6,000	8,538	500	500	38,113	3,000
Williamsburg	College of William and Mary.	64	0	178	0	0	0	0	0	242	0	50	0	14	2	120	O	24,400	3,938	27,308	3,560	53,550	18,000
WASHINGTON.																							
Seattle	University of Washington.	0	0	719	959	51	44	43	39	1,726	1,272	477	349	15	2	120	O	199,522	95,356	1,926	50,987	549,073	0
Spokane	Spokane	41	40	2	8	0	0	0	0	43	48	2	6	16	1	.....	X	5,000	971	500	8,400	....	....

Elkins..........	Davis and Elkins College	22	7	29	18	3	1	2	3	95	41	10	10	14	2	128	O	6,642	4,435	....	4,089	16,600	18,508
WISCONSIN.																							
Appleton.......	Lawrence College........	0	0	294	270	0	0	3	13	338	476	131	121	15	2	128	O	38,776	18,711	3,888	6,082	110,566	6,500
Beloit...........	Beloit....................	0	0	246	142	0	0	0	0	246	142	115	43	15	0	120	O	59,006	27,619	....	15,118	138,298	0
Madison.........	University of Wisconsin.	.....	.....	1,634	1,066	.....	.....	58	43	3,146	1,514	507	320	14	0	120	O	483,174	163,030	120,021	121,518	2,767,701	0
Milton..........	Milton College...........	8	13	28	33	2	1	3	5	56	80	14	15	15	2	128	O	9,233	2,845	5,790	244	20,835	2,200
Milwaukee......	Concordia College........	142	0	54	0	0	0	0	0	196	0	0	0	.....	.....	.....	X	10,680	3,275	4,500	....	28,455	600
Do..........	Marquette University....	.....	0	.....	0	0	0	0	0	.....	.....	.....	.....	.....	.....	.....	.....	....	....	....	....	....	....
Do..........	Milwaukee-Downer College.	0	0	0	190	0	10	0	34	0	347	0	96	15	1	120	O	21,870	16,507	17,132	10,654	131,164	....
Plymouth.......	Mission House...........	36	2	35	1	0	0	3	0	97	3	4	0	15	.....	150	O	....	....	....	....	....	....
Prairie du Chien	Campion College.........	285	0	80	0	0	0	0	0	365	0	180	0	16	2	142	O	....	....	....	....	65,770	....
Ripon...........	Ripon College............	0	0	164	93	1	1	0	0	182	159	.....	.....	15	2	124	O	18,720	10,511	....	47,611	60,784	....
Sinsinawa......	St. Clara College and Academy.	0	75	0	47	0	0	0	22	0	160	0	36	15	.....	120	O	....	5,100	20,000	....	43,179	45,000

FINANCIAL FOUNDATION.

Suggested Requirements I and II.—I. A college of arts and sciences should have an annual income of at least $40,000. At least three fifths of an income as small as $40,000 should be expended for salaries for teaching and administration. Exception is made of certain denominational institutions whose teaching staffs work without salaries.

II. A study of conditions at numerous substantial institutions indicates that college work of standard grade costs somewhere in the neighborhood of $200 a year per student. The minimum productive endowment for a college of arts and sciences should be $250,000. It is noted, however, that with advancing prices this amount should be rapidly increased; probably twice as much will be needed in the near future to give an institution the assurance of stability. Institutions should strive to bring their endowment to the point where it will yield at least half the money needed for annual expenses.

TABLE 2.—*Productive endowment, income, and debt, 1914–15.*

[Tax-supported institutions are marked with † and Roman Catholic institutions with *.]

Institutions.	Endowment.	Income.	Debt.
University of Alabama†	$627,467	$210,421	0
University of Arizona†	10,500	423,021	0
Central college, Arkansas	....	29,193	$24,000
Hendrix College, Arkansas	295,000	39,966	58,886
Pomona College, California	673,198	347,133	0
Occidental College, California	312,000	50,727	8,000
Mills College, California	486,310	80,774	0
University of Redlands, California	97,000	50,505	125,529
University of Santa Clara,* California	....	274,200	....
Leland Stanford Junior University, California	23,975,338	1,235,891	0
University of Colorado†	83,000	300,436	0
Colorado College	1,042,592	148,887	0
University of Denver, Colorado	420,000	140,000	....
Trinity College, Connecticut	1,226,801	83,835	5,000
Yale University, Connecticut	16,152,836	1,777,134	0
Gallaudet College, District of Columbia	....	....	....
George Washington University, District of Columbia	136,340	220,954	0
Howard University (colored), District of Columbia	309,018	203,964	0
University of Florida†	219,650	170,297	0
Columbia College, Florida	....	....	25,000
Florida State College for Women†	....	97,885	0
University of Georgia†	372,270	286,302	0
Atlanta University (colored), Georgia	107,563	62,927	42,709
Cox College, Georgia	....	31,000	....
North Georgia Agricultural College	....	38,700	....
Agnes Scott College, Georgia	175,568	94,711	35,150
Piedmont College, Georgia	105,000	34,719	11,000
Bessie Tift College, Georgia	6,000	56,000	87,000
Brenau College, Georgia	....	151,860	27,000
Emory University, Georgia	....	....	65,500
Shorter College, Georgia	50,000	70,560	....
University of Idaho†	666,346	264,867	0
Aurora College, Illinois	....	....	....
Illinois Wesleyan University	373,729	49,851	0
Blackburn College, Illinois	248,813	14,618	13,000
De Paul University,* Illinois	....	53,434	....
Loyola University,* Illinois	....	....	....
James Millikin University, Illinois	208,777	96,588	0
Knox College, Illinois	504,463	71,155	89,000
Illinois Woman's College	123,155	104,984	0
Lake Forest College, Illinois	832,938	216,153	0
Frances Shimer School, Illinois	78,926	43,823	30,000
Northwestern College, Illinois	250,529	40,082	55,000
Rockford College, Illinois	208,976	92,189	13,000

BLE 2.—*Productive endowment, income, and debt, 1914–15*—Continued.

x-supported institutions are marked with † and Roman Catholic institutions with °.]

Institutions.	Endowment.	Income.	Debt.
College, Illinois	$441,764	$99,914	$69,075
iversity†	744,000	15 ,000	0
llege, Indiana	739,800	57,702	0
ollege, Indiana	493,538	117,551	...
ollege, Indiana	300,519	48,253	0
niversity, Indiana	1,425,959	127,726	0
ege, Indiana	...	45,314	...
of Notre Dame,° Indiana	...	...	0
versity, Indiana	1,290	47,135	34,500
Teachers College†	...	331,865	0
, Iowa	750,000	63,452	260,000
ollege, Iowa	19,000	19,797	...
College, Iowa	111,000	51,229	80,000
ersity, Iowa	804,766	189,718	283,000
lege, Iowa	235,176	38,217	61,875
rsity of Iowa†	494,338	986,513	0
ege, Iowa	861,223	132,079	0
versity of Iowa	89,826	18,850	6,744
College, Iowa	400,000	46,344	...
a College, Iowa	25,000	20,072	50,000
llege, Kansas	85,000	25,000	1,200
mporia, Kansas	112,000	36,549	61,635
iversity, Kansas	236,786	38,978	38,900
sleyan University	115,000	20,045	19,000
ege, Kansas	139,271	21,453	8,000
College, Kansas	363,377	78,753	60,000
rn College, Kansas	130,000	43,615	...
ege, Kentucky	200,000	11,018	0
ege, Kentucky	...	...	...
College, Kentucky	275,000	41,215	22,000
of Kentucky†	205,000	321,062	30,552
ia College, Kentucky	319,612	41,270	...
of Louisville,† Kentucky	...	79,250	0
ege, Kentucky	63,800	12,490	8,569
Newcomb Memorial College, Louisiana	2,765,000	166,936	0
versity,° Louisiana	...	...	...
ollege, Maine	2,312,868	151,563	0
ge, Maine	749,993	89,809	3,500
of Maine†	252,050	364,042	108,842
College, Maryland	...	53,000	0
llege, Maryland	473,831	212,569	0
cins University, Maryland	7,287,077	628,830	...
lege (colored), Maryland	56,000	34,213	25,000
College, Maryland	...	62,795	5,000
College,° Maryland	...	26,000	0
ge, Maryland	42,500	71,840	111,700
College for Women	...	...	40,000
ollege, Massachusetts	2,736,058	221,817	0
versity, Massachusetts	1,308,869	222,474	0
niversity, Massachusetts	28,471,046	3,019,602	0
ge, Massachusetts	2,182,296	736,734	0
ollege, Massachusetts	896,310	119,676	0
yoke College, Massachusetts	1,426,173	336,998	0
ge, Massachusetts	3,020,204	301,955	0
ge, Massachusetts	1,300,000	85,250	0
ge, Michigan	401,070	54,673	10,366
of Michigan†	963,193	2,321,241	0
University,° Minnesota	...	71,145	...
Seminary, Minnesota	32,570	21,007	15,000
ollege, Minnesota	871,937	204,584	51,161
niversity, Minnesota	842,000	63,264	0
College, Minnesota	468,739	55,796	0
t. Catherine,° Minnesota	...	...	120,000
dolphus College, Minnesota	265,000	42,295	35,000
t. Teresa,° Minnesota	...	72,500	200,000
College	125,000	60,293	...
ollege, Mississippi	...	...	...
of Mississippi†	700,000	269,500	23,000
ollege, Missouri	40,000	49,000	20,000
er College, Missouri	...	...	31,000
well College, Missouri	853,085	84,047	44,000
e, Missouri	453,876	91,708	0
d College, Missouri	22,000	128,307	0
College, Missouri	...	...	...
niversity, Missouri	...	...	...
University, Missouri	6,455,804	716,471	...
ge, Missouri	250,000	54,084	0
sleyan College, Missouri	209,000	24,607	39,000
of Montana†	...	215,945	0

TABLE 2.—*Productive endowment, income, and debt, 1914–15*—Continued.

[Tax-supported institutions are marked with † and Roman Catholic institutions with °.]

Institutions.	Endowment.	Income.	Debt.
Bellevue College, Nebraska	$15,085	$36,155	$24,000
Union College, Nebraska		66,159	0
Doane College, Nebraska	282,757	45,448	40,765
University of Nebraska†	787,255	1,368,039	0
New Hampshire College of Agriculture and Mechanic Arts†	950,000	273,296	0
College of St. Elizabeth,° New Jersey		48,675	
Upsala College, New Jersey		13,158	21,620
University of New Mexico†		62,577	0
New York State College for Teachers†		110,103	0
Alfred University, New York	411,963	36,307	0
St. Stephen's College, New York	102,733	40,546	40,000
Wells College, New York	404,400	146,774	40,000
St. Lawrence University, New York	747,940	236,341	2,000
Elmira College, New York	119,780	104,543	0
Hobart College, New York	750,073	125,890	0
College of New Rochelle,° New York		70,289	52,122
Barnard College, New York	1,586,137	262,423	0
Columbia University, New York	30,900,471	4,204,937	0
College of the City of New York†		526,108	0
Hunter College of the City of New York†		550,124	0
New York University	1,393,805	630,415	645,000
Vassar College, New York	1,660,105	774,613	
University of Rochester, New York	1,650,629	139,996	0
Union University, New York	982,173	140,117	0
University of North Carolina†	148,594	261,658	109,315
Davidson College, North Carolina	285,000	51,830	0
Trinity College, North Carolina	1,395,292	118,829	0
Elon College, North Carolina	86,460	52,686	52,515
Guilford College, North Carolina	175,000	43,600	60,000
Shaw University (colored), North Carolina	51,122	37,257	
Weaver College, North Carolina			13,260
Salem Academy and College, North Carolina	170,266	113,367	
University of North Dakota†	1,705,761	268,947	38,500
Municipal University of Akron,† Ohio	82,753	65,833	5,346
Ohio University†	150,000	419,250	0
Baldwin-Wallace College, Ohio	535,102	46,447	52,650
Bluffton College, Ohio	45,000	10,456	70,000
Cedarville College, Ohio	85,907	7,708	0
University of Concinnati,† Ohio	869,671	867,985	
Western Reserve University, Ohio	3,526,608	438,278	0
Capital University, Ohio	145,309	24,883	
St. Mary College,° Ohio			
Defiance College, Ohio	273,266	41,688	20,000
Ohio Wesleyan University	990,100	145,300	
Kenyon College, Ohio	509,002	66,841	18,000
Marietta College, Ohio	556,428	42,929	0
Muskingum College, Ohio	123,124	50,016	97,000
Miami University,† Ohio	109,775	328,734	0
Oxford College for Women, Ohio	1,000	53,127	15,155
Western College for Women, Ohio	103,616	112,384	0
Lake Erie College, Ohio	244,852	76,189	15,000
Rio Grande College, Ohio	78,000	8,200	3,000
Otterbein University, Ohio	250,000	59,196	36,770
College of Wooster, Ohio	1,229,578	210,004	3,434
Methodist University of Oklahoma	65,000	14,315	4,000
Kingfisher College, Oklahoma	133,813	17,268	0
University of Oklahoma†	3,670,000	231,147	0
Albany College, Oregon	204,219	22,225	54,000
Pacific University, Oregon	224,554	31,802	45,000
McMinnville College, Oregon	60,450	27,247	30,665
Reed College, Oregon	3,000,000	122,850	0
Pacific College, Oregon	110,000	7,500	21,570
Willamette University, Oregon	516,555	39,080	28,000
Moravian College, Pennsylvania	108,352	33,402	0
Bryn Mawr College, Pennsylvania	2,002,300	280,562	51,265
Beaver College, Pennsylvania	12,000	24,667	0
Wilson College, Pennsylvania	71,475	65,416	13,000
Lafayette College, Pennsylvania	620,128	130,484	126,232
Pennsylvania College	390,000	65,000	0
Haverford College, Pennsylvania	2,000,268	160,588	96,578
Franklin and Marshall College, Pennsylvania	485,645	47,705	0
Lincoln University (colored), Pennsylvania	280,453	35,951	21,709
Allegheny College, Pennsylvania	425,000	102,568	11,882
Irving Female College, Pennsylvania		35,541	
Albright College, Pennsylvania	300,000	41,487	0
Westminister College, Pennsylvania	435,390	69,914	80,000
Drexel Institute, Pennsylvania	2,000,000	95,138	
University of Pennsylvania	6,025,177	1,738,088	
Susquehanna University, Pennsylvania	72,000	31,600	50,000

ABLE 2.—*Productive endowment, income, and debt, 1914–15*—Continued.

Tax-supported institutions are marked with † and Roman Catholic institutions with *.]

Institutions.	Endowment.	Income.	Debt.
ania State College†	$598,913	$241,309	
ore College, Pennsylvania	1,627,447	927,009	0
ton and Jefferson College, Pennsylvania	914,396	68,941	$118,323
urg College, Pennsylvania	86,060	20,685	2,000
f Charleston,† South Carolina	306,300	22,102	0
y of South Carolina†		142,227	
University, South Carolina		49,447	
College, South Carolina			
College, South Carolina	156,358	74,567	0
College, South Carolina	194,179	39,578	42,486
y of South Dakota†		194,772	0
lege, Tennessee	25,000		
y of Chattanooga, Tennessee	407,519	49,917	72,000
n College, Tennessee	177,851	64,011	
e College (colored), Tennessee	10,500	41,580	10,336
College, Tennessee			7,000
e College		52,536	23,077
eabody College for Teachers, Tennessee	2,000,000	169,243	0
versity (colored), Tennessee	190,592	54,242	6
lt University, Tennessee	2,150,000	268,292	1
y of the South, Tennessee	393,282	131,736	325,4 0
y of Texas†	2,000,000	602,609	0
Payne College, Texas		22,000	00
itute, Texas	10,000,000	529,000	100,000
ollege, Texas	180,000	82,880	420,94
niversity, Texas	305,904	148,919	0
y of Utah†		241,919	0
ry College, Vermont	518,983	126,925	0
el's College,* Vermont		22,450	
ter College, Virginia	20,168	25,414	0
y of Virginia†	2,211,472	444,315	200,000
Institute, Virginia			
nd Henry College, Virginia	25,000	53,254	
n-Sidney College, Virginia	180,654	25,712	0
ollege, Virginia		107,489	
ton and Lee University, Virginia	878,902	104,759	0
h-Macon Woman's College, Virginia	262,000	202,900	42,000
d College, Virginia			
Union University (colored)	100,000	38,113	3,000
f William and Mary,† Virginia	151,327	53,550	18,000
y of Washington†	5,000,000	564,804	0
College, Washington			
d Elkins College, West Virginia	100,000	16,600	18,508
College, Wisconsin	896,211	110,566	6,500
llege, Wisconsin	1,339,241	138,298	0
y of Wisconsin†	782,662	2,767,701	2,200
llege, Wisconsin	145,153	20,835	900
College, Wisconsin	8,500	28,455	
e-Downer College, Wisconsin	216,207	131,164	
House, Wisconsin	20,000		
College,* Wisconsin	50,000	65,770	
llege, Wisconsin	252,199	60,784	
College and Academy,* Wisconsin		35,134	45,000

TABLE 3.—*Income and amount spent for salaries of college teachers.*

Institutions.	Income, 1914–15.	Spent for salaries of college teachers, 1914–15.
University of Alabama	$210,421	$58,736
University of Arizona	423,021	61,300
Central College, Arkansas	29,193	3,800
Hendrix College, Arkansas	39,966	11,625
Pomona College, California	347,133	50,813
Occidental College, California	50,727	26,853
Mills College, California	80,774	35,067
University of Redlands, California	50,505	23,200
University of Santa Clara, California	274,200	....
Leland Stanford Junior University, California	1,235,891	500,841
University of Colorado	300,436	96,300
Colorado College	148,887	58,166
University of Denver, Colorado	140,000	....
Trinity College, Connecticut	83,835	42,480
Yale University, Connecticut	1,777,134	280,000
Gallaudet College, District of Columbia	....	....
George Washington University, District of Columbia	220,954	45,621
Howard University (colored), District of Columbia	203,964	35,675
University of Florida	170,297	28,070
Columbia College, Florida	....	4,293
Florida State College for Women	97,885	50,315
University of Georgia	286,302	52,020
Atlanta University (colored), Georgia	62,927	20,135
Cox College, Georgia	31,000	6,284
North Georgia Agricultural College	38,700	18,000
Agnes Scott College, Georgia	94,711	25,624
Piedmont College, Georgia	34,719	8,575
Bessie Tift College, Georgia	56,000	20,000
Brenau College, Georgia	151,860	13,460
Emory University, Georgia	....	26,858
Shorter College, Georgia	70,560	....
University of Idaho	264,867	58,297
Aurora College, Illinois	....	....
Illinois Wesleyan University	49,851	15,400
Blackburn College, Illinois	14,618	8,000
De Paul University, Illinois	53,434	6,000
Loyola University, Illinois	....	....
James Millikin University, Illinois	96,588	41,157
Knox College, Illinois	71,155	30,654
Illinois Woman's College	104,984	21,032
Lake Forest College, Illinois	216,153	36,400
Frances Shimer School, Illinois	43,823	12,500
Northwestern College, Illinois	40,082	16,000
Rockford College, Illinois	92,189	19,268
Augustana College, Illinois	99,914	21,809
Indiana University	615,000	241,311
Wabash College, Indiana	57,702	35,641
Earlham College, Indiana	117,551	36,652
Franklin College, Indiana	48,253	14,206
De Pauw University, Indiana	127,726	54,262
Butler College, Indiana	45,314	30,085
University of Notre Dame, Indiana	....	31,730
Taylor University, Indiana	47,135	5,800
Iowa State Teachers' College	331,865	147,296
Coe College, Iowa	63,452	29,734
Wartburg College, Iowa	19,797	....
Des Moines College, Iowa	51,229	12,000
Drake University, Iowa	189,718	40,029
Parsons College, Iowa	38,217	12,800
State University of Iowa	986.513	193,528
Cornell College, Iowa	132,079	32,050
Central University of Iowa	18,850	10,365
Morningside College, Iowa	46,344	20,600
Buena Vista College, Iowa	20,072	8,350
Midland College, Kansas	25,000	12,200
College of Emporia, Kansas	36,549	22,820
Ottawa University, Kansas	38,978	12.912
Kansas Wesleyan University	20,045	14,200
Cooper College, Kansas	21,453	11,648
Washburn College, Kansas	78,753	19,834
Southwestern College, Kansas	43,615	10,575
Ogden College, Kentucky	11,018	6,000
Centre College, Kentucky	....	19,000
Georgetown College, Kentucky	41,215	12,450
University of Kentucky	321,062	9,175
Transylvania College, Kentucky	41,270	12,200
University of Louisville, Kentucky	79,250	33,018
Bethel College, Kentucky	12,490	4,177

.—*Income and amount spent for salaries of college teachers*—Continued.

Institutions.	Income, 1914-15.	Spent for salaries of college teachers, 1914-15.
comb Memorial College, Louisiana	$166,936	$53,270
sity, Louisiana	....	....
ge, Maine	151,563	65,101
Maine	89,809	44,896
aine	364,042	134,097
ege, Maryland	53,000	17,600
e, Maryland	212,569	44,741
University, Maryland	628,830	353,934
(colored), Maryland	34,213	6,675
llege, Maryland	62,795	13,000
ege, Maryland	26,000	....
Maryland	71,840	18,075
ege for Women	....	8,100
ge, Massachusetts	221,817	....
sity, Massachusetts	222,474	48,333
ersity, Massachusetts	3,019,602	550,723
Massachusetts	736,734	229,159
ge, Massachusetts	119,676	24,475
e College, Massachusetts	336,998	105,877
Massachusetts	301,955	....
Massachusetts	85,250	43,700
Michigan	54,673	17,861
ichigan	2,321,241	326,906
versity, Minnesota	71,145	....
inary, Minnesota	21,007	15,209
e, Minnesota	204,584	53,698
ersity, Minnesota	63,264	30,350
lege, Minnesota	55,796	24,954
atherine, Minnesota	....	38,000
lphus College, Minnesota	42,295	13,938
eresa, Minnesota	72,500	15,000
lege	60,293	....
ge, Mississippi	....	....
ississippi	269,500	40,000
ge, Missouri	49,000	9,786
ollege, Missouri	....	12,610
College, Missouri	84,047	21,491
issouri	91,708	23,350
ollege, Missouri	128,307	7,500
llege, Missouri	....	....
ersity, Missouri	....	....
niversity, Missouri	716,471	260,448
Missouri	54,084	26,225
an College, Missouri	24,607	8,750
Montana	215,945	64,995
ge, Nebraska	36,155	11,500
Nebraska	66,159	8,381
Nebraska	45,448	17,670
Nebraska	1,368,039	250,578
ire College of Agriculture and Mechanic Arts	273,236	64,500
Elizabeth, New Jersey	48,675	10,000
New Jersey	13,158	8,860
New Mexico	62,577	34,450
te College for Teachers	110,103	9,432
sity, New York	36,307	21,787
College, New York	40,546	17,000
New York	146,774	40,288
University, New York	236,341	23,790
New York	104,543	32,733
e, New York	125,890	33,500
Rochelle, New York	70,289	7,536
ge, New York	262,423	130,330
versity, New York	4,204,937	1,252,658
City of New York	526,108	319,325
e of the City of New York	550,124	287,546
iversity	630,415	52,261
New York	774,613	181,498
Rochester, New York	139,996	78,232
sity, New York	140,117	65,379
North Carolina	261,658	75,629
ege, North Carolina	51,830	27,185
e, North Carolina	118,829	63,142
North Carolina	52,686	15,800
ge, North Carolina	43,600	12,150
ity (colored), North Carolina	37,257	....
e, North Carolina	....	4,800
y and College, North Carolina	113,367	19,370
North Dakota	268,947	115,200

TABLE 3.—*Income and amount spent for salaries of college teachers*—Continued.

Institutions.	Income, 1914–15.	Spent for salaries of college teachers, 1914–15.
Municipal University of Akron, Ohio	$65,833	$28,128
Ohio University	419,250	36,150
Baldwin-Wallace College, Ohio	46,447	24,341
Bluffton College, Ohio	23,264	20,720
Cedarville College, Ohio	7,708	6,168
University of Cincinnati, Ohio	867,985	124,605
Western Reserve University, Ohio	438,278	138,922
Capital University, Ohio	24,883	17,450
St. Mary College, Ohio	....	....
Defiance College, Ohio	41,688	15,259
Ohio Wesleyan University	145,300	66,777
Kenyon College, Ohio	66,841	21,688
Marietta College, Ohio	42,929	22,795
Muskingum College, Ohio	50,016	10,061
Miami University, Ohio	328,734	53,050
Oxford College for Women, Ohio	53,127	12,000
Western College for Women, Ohio	112,384	26,752
Lake Erie College, Ohio	76,189	25,220
Rio Grande College, Ohio	8,200	4,000
Otterbein University, Ohio	59,196	19,470
College of Wooster, Ohio	210,004	50,971
Methodist University of Oklahoma	14,315	10,000
Kingfisher College, Oklahoma	17,268	9,600
University of Oklahoma	231,147	72,452
Albany College, Oregon	22,225	11,450
Pacific University, Oregon	31,802	11,270
McMinnville College, Oregon	27,247	13,975
Pacific College, Oregon	7,500	8,750
Reed College, Oregon	122,850	44,325
Willamette University, Oregon	39,080	12,000
Moravian College, Pennsylvania	33,402	9,500
Bryn Mawr College, Pennsylvania	280,562	110,135
Beaver College, Pennsylvania	24,667	9,354
Wilson College, Pennsylvania	65,416	13,350
Lafayette College, Pennsylvania	130,484	72,437
Pennsylvania College	65,000	26,350
Haverford College, Pennsylvania	160,588	56,350
Franklin and Marshall College, Pennsylvania	47,705	29,184
Lincoln University (colored), Pennsylvania	35,951	10,766
Allegheny College, Pennsylvania	102,568	40,283
Irving Female College, Pennsylvania	35,541	10,820
Albright College, Pennsylvania	41,487	12,500
Westminster College, Pennsylvania	69,914	29,479
Drexel Institute, Pennsylvania	95,138	....
University of Pennsylvania	1,738,088	256,250
Susquehanna University, Pennsylvania	31,600	18,000
Pennsylvania State College	941,309	408,059
Swarthmore College, Pennsylvania	227,009	70,400
Washington and Jefferson College, Pennsylvania	68,941	28,835
Waynesburg College, Pennsylvania	20,685	9,000
College of Charleston, South Carolina	22,102	12,100
University of South Carolina	142,227	57,235
Furman University, South Carolina	49,447	....
Columbia College, South Carolina	....	....
Converse College, South Carolina	74,567	17,208
Wofford College, South Carolina	39,578	23,213
University of South Dakota	194,772	73,986
King College, Tennessee	....	....
University of Chattanooga, Tennessee	49,917	17,200
Tusculum College, Tennesseee	64,011	7,775
Knoxville College (colored), Tennessee	41,580	22,689
Milligan College, Tennessee	....	6,000
Tennessee College	52,536	7,975
George Peabody College for Teachers, Tennessee	169,243	61,000
Fisk University (colored), Tennessee	54,242	16,517
Vanderbilt University, Tennessee	268,292	58,000
University of the South, Tennessee	131,736	20,229
University of Texas	602,609	239,107
Howard Payne College, Texas	22,000	10,500
Rice Institute, Texas	529,000	54,108
Austin College, Texas	82,880	15,100
Baylor University, Texas	148,919	37,642
University of Utah	241,919	175,135
Middlebury College, Vermont	126,925	43,447
St. Michael's College, Vermont	22,450	....
Bridgewater College, Virginia	25,414	7,200
University of Virginia	444,315	98,406
Roanoke Institute, Virginia	....	....

TABLE 3.—*Income and amount spent for salaries of college teachers*—Continued.

Institutions.	Income, 1914–15.	Spent for salaries of college teachers, 1914–15.
mory and Henry College, Virginia	$53,254	....
ampden-Sidney College, Virginia	25,712	$12,375
ollins College, Virginia	107,489	11,450
ashington and Lee University, Virginia	104,759	39,801
andolph-Macon Woman's College, Virginia	202,900	53,735
ichmond College, Virginia	....	53,200
irginia Union University (colored)	38,113	6,000
ollege of William and Mary, Virginia	53,550	24,400
niversity of Washington	564,804	199,522
pokane College, Washington	....	5,000
avis and Elkins College, West Virginia	16,600	6,642
awrence College, Wisconsin	110,566	38,776
eloit College, Wisconsin	138,298	59,006
niversity of Wisconsin	2,767,701	483,174
ilton College, Wisconsin	20,835	9,233
oncordia College, Wisconsin	28,455	10,680
ilwaukee-Downer College, Wisconsin	131,164	21,870
ission-House, Wisconsin	....	....
ampion College, Wisconsin	65,770	....
ipon College, Wisconsin	60,784	18,720
t. Clara College and Academy, Wisconsin	35,134	1,260

NUMBER OF DEPARTMENTS.

Suggested Requirement III.—A college of arts and sciences should ave as many as 11 departments, in each of which at least one eacher should devote his whole time to collegiate instruction. ome of the larger departments will require more than one instructor. he following departments are suggested: English; modern languages or French or German or Spanish) other than English; ancient lan- uages; history; philosophy and psychology; economic, political, nd social sciences; mathematics; physics; chemistry; biology (or oology and botany); geology and geography. In addition, it seems esirable, wherever possible, to separate the departments of Ro- ance and Germanic languages; and some of the other groups might ell be divided, especially in the larger colleges.

TABLE 4.—*Institutions having eleven specified departments or fewer, 1915–16.*

Institutions.	Number of departments.	Institutions.	Number of departments.
niversity of Alabama	11	University of Denver, Colorado	11
niversity of Arizona	11	Trinity College, Connecticut	11
entral College, Arkansas	4	Yale University, Connecticut	11
endrix College, Arkansas	2	Gallaudet College, District of Columbia	4
omona College, California	11	George Washington University, District of Columbia	11
ccidental College, California	11	Howard University (colored), District of of Columbia	11
ills College, California	7	University of Florida	11
niversity of Redlands, California	11	Columbia College, Florida	8
niversity of Santa Clara, California	11	Florida State College for Women	11
eland Standord Junior University, California	11	University of Georgia	11
niversity of Colorado	11	Atlanta University (colored), Georgia	....
olorado College	11		

TABLE 4.—*Institutions having eleven specified departments or fewer, 1915–16.*

Institutions.	Number of departments.
Cox College, Georgia	7
North Georgia Agricultural College	3
Agnes Scott College, Georgia	11
Piedmont College, Georgia	5
Bessie Tift College, Georgia	8
Brenau College, Georgia	11
Emory University, Georgia	11
Shorter College, Georgia	4
University of Idaho	11
Aurora College, Illinois	8
Illinois Wesleyan University	8
Blackburn College, Illinois	7
De Paul University, Illinois	11
Loyola University, Illinois	11
James Millikin University, Illinois	11
Knox College, Illinois	11
Illinois Woman's College	11
Lake Forest College, Illinois	11
Frances Shimer School, Illinois	....
Northwestern College, Illinois	11
Rockford College, Illinois	11
Augustana College, Illinois	7
Indiana University	11
Wabash College, Indiana	11
Earlham College, Indiana	11
Franklin College, Indiana	11
De Pauw University, Indiana	11
Butler College, Indiana	11
University of Notre Dame, Indiana	11
Taylor University, Indiana	5
Iowa State Teachers College	7
Coe College, Iowa	11
Wartburg College, Iowa	....
Des Moines College, Iowa	....
Drake University, Iowa	11
Parsons College, Iowa	9
State University of Iowa	11
Cornell College, Iowa	11
Central University of Iowa	9
Morningside College, Iowa	11
Buena Vista College, Iowa	11
Midland College, Kansas	5
College of Emporia, Kansas	11
Ottawa University, Kansas	11
Kansas Wesleyan University	8
Cooper College, Kansas	8
Washburn College, Kansas	11
Southwestern College, Kansas	8
Ogden College, Kentucky	7
Centre College, Kentucky	9
Georgetown College, Kentucky	9
University of Kentucky	11
Transylvania College, Kentucky	7
University of Louisville, Kentucky	11
Bethel College, Kentucky	5
H. Sophie Newcomb Memorial College, Louisiana	11
Loyola University, Louisiana	7
Bowdoin College, Maine	11
Bates College, Maine	11
University of Maine	11
St. John's College, Maryland	11
Goucher College, Maryland	11
Johns Hopkins University, Maryland	11
Morgan College (colored), Maryland	4
Washington College, Maryland	6
Rockhill College, Maryland	....
Hood College, Maryland	8
Maryland College for Women	6
Amherst College, Massachusetts	11
Boston University, Massachusetts	11
Harvard University, Massachusetts	11
Smith College, Massachusetts	11
Wheaton College, Massachusetts	11
Mount Holyoke College, Massachusetts	11
Tufts College, Massachusetts	11
Clark College, Massachusetts	11
Alma College, Michigan	
University of Michigan	
St. John's University, Minnesota	
Augsburg Seminary, Minnesota	
Carelton College, Minnesota	
Hamline University, Minnesota	
Macalester College, Minnesota	
College of St. Catherine, Minnesota	
Gustavus Adolphus College, Minnesota	
College of St. Teresa, Minnesota	
Mississippi College	
Meridian College, Mississippi	....
University of Mississippi	
Stephens College, Missouri	
Westminster College, Missouri	
William Jewell College, Missouri	
Park College, Missouri	
Lindenwood College, Missouri	....
Forest Park College, Missouri	
St. Louis University, Missouri	
Washington University, Missouri	
Drury College, Missouri	
Central Wesleyan College, Missouri	
University of Montana	
Bellevue College, Nebraska	
Union College, Nebraska	
Doane College, Nebraska	
University of Nebraska	
New Hampshire College of Agriculture and Mechanic Arts	
College of St. Elizabeth, New Jersey	
Upsala College, New Jersey	
University of New Mexico	
New York State College for Teachers	
Alfred University, New York	
St. Stephen's University, New York	
Wells College, New York	
St. Lawrence University, New York	
Elmira College, New York	
Hobart College, New York	
College of New Rochelle, New York	
Barnard College, New York	
Columbia University, New York	
College of the City of New York	
Hunter College of the City of New York	
New York University	
Vassar College, New York	
University of Rochester, New York	
Union University, New York	
University of North Carolina	
Davidson College, North Carolina	
Trinity College, North Carolina	
Elon College, North Carolina	
Guilford College, North Carolina	
Shaw University (colored), North Carolina	
Weaver College, North Carolina	....
Salem Academy and College, North Carolina	
University of North Dakota	
Municipal University of Akron, Ohio	
Ohio University	
Baldwin Wallace College, Ohio	
Bluffton College, Ohio	
Cedarville College, Ohio	
University of Cincinnati, Ohio	
Western Reserve University, Ohio	
Capital University, Ohio	
St. Mary College, Ohio	
Defiance College, Ohio	
Ohio Wesleyan University	
Kenyon College, Ohio	
Marietta College, Ohio	
Muskingum College, Ohio	
Miami University, Ohio	
Oxford College for Women, Ohio	
Western College for Women, Ohio	

.—*Institutions having eleven specified departments or fewer, 1915-16*—**Contd.**

Institutions.	Number of departments.	Institutions.	Number of departments.
College, Ohio	11	Tusculum College, Tennessee	4
e College, Ohio	5	Knoxville College (colored), Tennessee	....
University, Ohio	11	Milligan College, Tennessee	6
Wooster, Ohio	11	Tennessee College	....
University of Oklahoma	6	George Peabody College for Teachers, Tennessee	4
College, Oklahoma	9	Fisk University (colored), Tennessee	3
of Oklahoma	11	Vanderbilt University, Tennessee	11
llege, Oregon	8	University of the South, Tennessee	11
iversity, Oregon	11	University of Texas	11
lle College, Oregon	8	Howard Payne College, Texas	10
lege, Oregon	2	Rice Institute, Texas	11
ge, Oregon	11	Austin College, Texas	9
e University, Oregon	10	Baylor University, Texas	11
College, Pennsylvania	4	University of Utah	11
r College, Pennsylvania	11	Middlebury College, Vermont	11
llege, Pennsylvania	6	St. Michael's College, Vermont	7
llege, Pennsylvania	8	Bridgewater College, Virginia	7
College, Pennsylvania	11	University of Virginia	11
nia College	11	Roanoke Institute, Virginia	....
College, Pennsylvania	11	Emory and Henry College, Virginia	11
and Marshall College, Penn-	11	Hampden-Sidney College, Virginia	9
niversity (colored), Pennsyl-	6	Hollins College, Virginia	8
College, Pennsylvania	11	Washington and Lee University, Virginia	11
male College, Pennsylvania	3	Randolph-Macon Woman's College, Virginia	11
ollege, Pennsylvania	7	Richmond College, Virginia	11
ter College, Pennsylvania	11	Virginia Union University (colored)	6
stitute, Pennsylvania	....	College of William and Mary (Virginia)	7
of Pennsylvania	11	University of Washington	11
nna University, Pennsylvania	5	Spokane College, Washington	....
nia State College	11	Davis and Elkins College, West Virginia	....
re College, Pennsylvania	11	Lawrence College, Wisconsin	11
on and Jefferson College, Penn-	11	Beloit College, Wisconsin	11
rg College, Pennsylvania	10	University of Wisconsin	11
Charleston, South Carolina	6	Milton College, Wisconsin	6
College, South Carolina	8	Concordia College, Wisconsin	5
of South Carolina	11	Milwaukee-Downer College, Wisconsin	11
niversity, South Carolina	10	Mission House, Wisconsin	....
College, South Carolina	10	Campion College, Wisconsin	11
ollege, South Carolina	10	Ripon College, Wisconsin	11
of South Dakota	11	St. Clara College and Academy, Wisconsin	6
ege, Tennessee	7		
of Chattanooga, Tennessee	....		

SIZE OF FACULTY.

ested Requirement IV.—A college of arts and sciences should faculty of at least 15 members devoting full time to college

ratio of instructors to students is also a significant factor in efficiency. It will be noted that the strongest institutions e one instructor to every 12 or 10 or even smaller number of ts.

TABLE 5.—*Number of faculty members devoting full time to college instructio*
Number of college students, 1915–16.

Institutions.	Faculty.	Students.		
		Men.	Women	Tota
University of Alabama	24	406	88	
University of Arizona	28	209	141	
Central College, Arkansas	15	0	55	
Hendrix College, Arkansas	13	244	25	
Pomona College, California	45	241	299	
Occidental College, California	22	195	138	
Mills College, California	34	0	187	
University of Redlands, California	14	58	119	
University of Santa Clara, California	2	93	0	
Leland Stanford Junior University, California	145	1,644	556	2,
University of Colorado	76	402	448	
Colorado College	35	173	354	
University of Denver, Colorado	28	270	310	
Trinity College, Connecticut	25	235	0	
Yale University, Connecticut	104	1,483	0	1,
Gallaudet College, District of Columbia	16	48	30	
George Washington University, District of Columbia	38	476	263	
Howard University (colored), District of Columbia	24	262	71	
University of Florida	17	96	0	
Columbia College, Florida	15	46	47	
Florida State College for Women	21	0	153	
University of Georgia	31	278	0	
Atlanta University (colored), Georgia	(1)	39	16	
Cox College, Georgia	8	0	102	
North Georgia Agricultural College	9	83	1	
Agnes Scott College, Georgia	28	0	299	
Piedmont College, Georgia	11	22	23	
Bessie Tift College, Georgia	25	0	166	
Brenau College, Georgia	16	0	198	
Emory University, Georgia	16	244	0	
Shorter College, Georgia	12	0	160	
University of Idaho	40	134	223	
Aurora College, Illinois	6	39	32	
Illinois Wesleyan University	15	124	119	
Blackburn College, Illinois	4	45	27	
De Paul University, Illinois	13	36	324	
Loyola University, Illinois	12	121	0	
James Millikin University, Illinois	39	131	205	
Knox College, Illinois	26	233	208	
Illinois Woman's College	12	0	176	
Lake Forest College, Illinois	20	102	92	
Frances Shimer School, Illinois	1	0	33	
Northwestern College, Illinois	11	160	91	
Rockford College, Illinois	28	0	217	
Augustana College, Illinois	7	136	61	
Indiana University	233	1,701	968	2,
Wabash College, Indiana	21	334	0	
Earlham College, Indiana	34	170	202	
Franklin College, Indiana	10	123	131	
De Pauw University, Indiana	36	367	378	
Butler College, Indiana	20	168	249	
University of Notre Dame, Indiana	70	274	0	
Taylor University, Indiana	26	65	49	
Iowa State Teachers College	67	240	1,579	1,
Coe College, Iowa	43	230	267	
Wartburg College, Iowa	2	28	0	
Des Moines College, Iowa	10	96	129	
Drake University, Iowa	31	260	229	
Parsons College, Iowa	12	81	74	
State University of Iowa	148	812	765	1,
Cornell College, Iowa	23	234	310	
Central University of Iowa	6	29	31	
Morningside College, Iowa	16	155	221	
Buena Vista College, Iowa	4	29	36	
Midland College, Kansas	12	45	55	
College of Emporia, Kansas	18	120	123	
Ottawa University, Kansas	11	94	110	
Kansas Wesleyan University	18	84	90	
Cooper College, Kansas	10	57	59	
Washburn College, Kansas	18	196	225	
Southwestern College, Kansas	21	152	124	
Ogden College, Kentucky	6	50	0	
Centre College, Kentucky	12	147	0	
Georgetown College, Kentucky	21	157	109	
University of Kentucky	28	162	156	

[1] None reported devoting full time to college instruction.

5.—*Number of faculty members devoting full time to college instruction—Number of college students, 1915–16*—Continued.

Institutions.	Faculty.	Students.		
		Men.	Women.	Total.
vania College, Kentucky	26	163	88	251
ity of Louisville, Kentucky	24	129	216	345
College, Kentucky	5	30	0	30
ie Newcomb Memorial College, Louisiana	29	0	273	273
University, Louisiana	10	45	0	45
n College, Maine	28	400	0	400
ollege, Maine	28	284	188	472
ity of Maine	56	185	81	266
's College, Maryland	10	100	0	100
r College, Maryland	35	0	508	508
opkins University, Maryland	49	195	0	195
College (colored), Maryland	3	27	22	49
gton College, Maryland	9	82	7	89
ill College, Maryland	11	40	0	40
ollege, Maryland	11	0	128	128
id College for Women	8	0	89	89
t College, Massachusetts	47	422	0	422
University, Massachusetts	29	104	348	452
d University, Massachusetts	......	......	......	......
College, Massachusetts	130	0	1,725	1,725
n College, Massachusetts	27	0	206	206
Holyoke College, Massachusetts	88	0	783	783
ollege, Massachusetts	33	216	0	216
ollege, Massachusetts	28	177	0	177
ollege, Michigan	19	88	90	178
ity of Michigan	266	298	1,127	1,425
is University, Minnesota	13	200	0	200
rg Seminary, Minnesota	2	31	0	31
a College, Minnesota	35	211	235	446
e University, Minnesota	18	224	194	418
ster College, Minnesota	22	159	137	296
of St. Catherine, Minnesota	34	0	221	221
us Adolphus College, Minnesota	8	102	64	166
of St. Teresa, Minnesota	26	0	104	104
ippi College	12	324	0	324
n College, Mississippi	17	104	278	382
ity of Mississippi	20	547	84	631
is College, Missouri	12	0	145	145
inster College, Missouri	5	119	0	119
a Jewell College, Missouri	10	279	0	279
ollege, Missouri	15	119	142	261
wood Female College, Missouri	(1)	0	86	86
Park College, Missouri	(1)	0	30	30
is University, Missouri	23	223	0	223
gton University, Missouri	70	232	309	541
College, Missouri	15	140	147	287
Wesleyan College, Missouri	18	60	35	95
sity of Montana	40	149	238	387
e College, Nebraska	7	30	37	67
College, Nebraska	14	64	51	115
College, Nebraska	16	70	63	133
sity of Nebraska	89	940	926	1,866
ampshire College of Agriculture and Mechanic Arts	31	123	113	236
of St. Elizabeth, New Jersey	30	0	110	110
College, New Jersey	3	8	6	14
sity of New Mexico	16	81	66	147
ork State College for Teachers	46	164	855	1,019
University, New York	28	76	83	159
phens College, New York	6	52	0	52
College, New York	31	0	202	202
rence University, New York	16	132	137	269
College, New York	32	0	278	278
College, New York	26	138	98	236
of New Rochelle, New York	21	0	193	193
d College, New York	88	0	694	694
ia University, New York	133	1,256	0	1,256
of the City of New York	128	2,229	0	2,229
College of the City of New York	118	0	1,943	1,943
ork University	47	278	0	278
College, New York	112	0	1,127	1,127
sity of Rochester, New York	45	306	224	530
University, New York	40	521	0	521
sity of North Carolina	52	544	5	549
on College, North Carolina	13	357	0	357
College, North Carolina	28	428	89	517
llege, North Carolina	18	199	102	301
d College, North Carolina	11	84	51	135

[1] None reported devoting full time to college instruction.

TABLE 5.—*Number of faculty members devoting full time to college instruction—Number of college students, 1915–16*—Continued.

Institutions.	Faculty.	Students.		
		Men.	Women.	Total.
Shaw University (colored), North Carolina	(1)	88	110	198
Weaver College, North Carolina	2	27	6	33
Salem Academy and College, North Carolina	20	0	189	189
University of North Dakota	49	166	116	282
Municipal University of Akron, Ohio	21	143	73	216
Ohio University	35	401	219	620
Baldwin-Wallace College, Ohio	19	136	108	244
Bluffton College, Ohio	14	52	64	116
Cedarville College, Ohio	4	35	33	68
University of Cincinnati, Ohio	236	501	880	1,381
Western Reserve University, Ohio	79	408	435	843
Capital University, Ohio	6	118	0	118
St. Mary College, Ohio	16	70	0	70
Defiance College, Ohio	13	99	116	215
Ohio Wesleyan University	58	545	464	1,009
Kenyon College, Ohio	14	151	0	151
Marietta College, Ohio	18	186	69	255
Muskingum College, Ohio	33	150	108	258
Miami University, Ohio	31	339	170	509
Oxford College for Women, Ohio	19	0	188	188
Western College for Women, Ohio	32	0	263	263
Lake Erie College, Ohio	21	0	133	133
Rio Grande College, Ohio	3	30	25	55
Otterbein University, Ohio	13	164	112	276
College of Wooster, Ohio	29	296	215	511
Methodist University of Oklahoma	7	36	28	64
Kingfisher College, Oklahoma	7	25	16	41
University of Oklahoma	63	797	776	1,573
Albany College, Oregon	9	31	31	62
Pacific University, Oregon	20	54	53	107
McMinnville College, Oregon	8	50	39	89
Pacific College, Oregon	4	22	26	48
Reed College, Oregon	19	110	147	257
Willamette University, Oregon	13	112	118	230
Moravian College, Pennsylvania	8	41	0	41
Bryn Mawr College, Pennsylvania	43	0	453	453
Beaver College, Pennsylvania	6	0	50	50
Wilson College, Pennsylvania	24	0	172	172
Lafayette College, Pennsylvania	50	477	0	477
Pennsylvania College	26	317	14	331
Haverford College, Pennsylvania	25	186	0	186
Franklin and Marshall College, Pennsylvania	16	291	0	291
Lincoln University (colored), Pennsylvania	13	163	0	163
Allegheny College, Pennsylvania	25	241	164	405
Irving Female College, Pennsylvania	10	0	31	31
Albright College, Pennsylvania	4	131	28	159
Westminster College, Pennsylvania	20	108	84	192
Drexel Institute, Pennsylvania	64	150	391	541
University of Pennsylvania	154	638	380	1,018
Susquehanna University, Pennsylvania	22	128	28	156
Pennsylvania State College	98	332	42	374
Swarthmore College, Pennsylvania	39	127	237	364
Washington and Jefferson College, Pennsylvania	32	333	0	333
Waynesburg College, Pennsylvania	11	49	55	104
College of Charleston, South Carolina	8	80	0	80
Columbia College, South Carolina	19	0	123	123
University of South Carolina	32	323	32	355
Furman University, South Carolina	11	205	0	205
Converse College, South Carolina	12	0	153	153
Wofford College, South Carolina	13	324	0	324
University of South Dakota	34	150	223	373
King College, Tennessee	6	60	0	60
University of Chattanooga, Tennessee	9	108	77	185
Tusculum College, Tennessee	5	45	48	93
Knoxville College (colored), Tennessee	(1)	26	15	41
Milligan College, Tennessee	9	98	42	140
Tennessee College	4	0	94	94
George Peabody College for Teachers, Tennessee	100	413	1,099	1,512
Fisk University (colored), Tennessee	18	95	84	179
Vanderbilt University, Tennessee	35	260	72	332
University of the South, Tennessee	18	160	0	160
University of Texas	117	882	811	1,693
Howard Payne College, Texas	7	65	49	114
Rice Institute, Texas	41	264	119	383
Austin College, Texas	8	108	0	108
Baylor University, Texas	66	243	268	511

[1] None reported devoting full time to college instruction.

5.—*Number of faculty members devoting full time to college instruction—Number of college students 1915–16*—Continued.

Institutions.	Faculty.	Students.		
		Men.	Women.	Total.
of Utah	37	764	838	1,602
g College, Vermont	30	187	156	343
l's College, Vermont	5	20	0	20
er College, Virginia	11	42	30	72
of Virginia	59	523	0	523
nstitute, Virginia	8	31	0	31
l Henry College, Virginia	10	176	0	176
Sidney College, Virginia	10	118	0	118
llege, Virginia	12	0	106	106
n and Lee University, Virginia	28	369	0	369
Macon Woman's College, Virginia	46	0	624	624
College, Virginia	29	268	117	385
nion University (colored)	9	62	7	69
William and Mary, Virginia	13	178	0	178
of Washington	124	813	1,042	1,855
ollege, Washington	(1)	2	8	10
Elkins College, West Virginia	18	34	22	56
College, Wisconsin	35	294	270	564
ege, Wisconsin	41	246	142	388
of Wisconsin	276	1,692	1,109	2,801
lege, Wisconsin	7	33	39	72
College, Wisconsin	1	54	0	54
-Downer College, Wisconsin	35	0	234	234
ouse, Wisconsin	9	38	1	39
ollege, Wisconsin	13	80	0	80
lege, Wisconsin	25	165	94	259
ollege and Academy, Wisconsin	8	0	69	69

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[1] None reported devoting full time to college instruction.

PARATION OF COLLEGE AND PREPARATORY DEPARTMENT.

ested Requirement V.—If a college of arts and sciences main- n academy or preparatory department, this department should stinct in students, faculty, and discipline." Exception may de, as noted above, of certain denominational institutions traditions and policy require the inclusion of secondary edu- with collegiate education under the same institutional control. n cases the preparatory department should be administratively ed from the college department.

LE 6.—*Faculty and number giving part time to preparatory work, 1915–16.*

Institutions.	Faculty.	Number giving part time to preparatory work.	Institutions.	Faculty.	Number giving part time to preparatory work.
of Alabama	24	0	Gallaudet College, District of Columbia	16	0
of Arizona	28	0	George Washington University, District of Columbia	38	0
llege, Arkansas	18	3	Howard University (colored), District of Columbia	25	1
ollege, Arkansas	13	0	University of Florida	17	0
ollege, California	45	0	Columbia College, Florida	20	5
College, California	22	0	Florida State College for Women	21	0
ge, California	34	0	University of Georgia	31	0
of Redlands, California	20	6	Atlanta University (colored), Georgia	17	17
of Santa Clara, California	8	2	Cox College, Georgia	11	3
nford Junior University, a	145	0	North Georgia Agriculture College	14	5
of Colorado	76	0	Agnes Scott College, Georgia	28	0
ollege	35	0	Piedmont College, Georgia	16	5
of Denver, Colorado	31	3			
llege, Connecticut	25	0			
rsity, Connecticut	104	0			

TABLE 6.—*Faculty and number giving part time to preparatory work, 1915–16*—Cont

Institutions.	Faculty.	Number giving part time to preparatory work.
Bessie Tift College, Georgia	25	0
Brenau College, Georgia	16	0
Emory University, Georgia	16	0
Shorter College, Georgia	12	0
University of Idaho	40	6
Aurora College, Illinois	12	0
Illinois Wesleyan College	18	3
Blackburn College, Illinois	12	8
De Paul University, Illinois	20	7
Loyola University, Illinois	18	6
James Millikin University, Illinois	39	....
Knox College, Illinois	26	0
Illinois Woman's College	16	4
Lake Forest College, Illinois	20	0
Frances Shimer School, Illinois	18	17
Northwestern College, Illinois	12	1
Rockford College, Illinois	28	0
Augustana College, Illinois	14	7
Indiana University	233	0
Wabash College, Indiana	21	0
Earlham College, Indiana	34	8
Franklin College, Indiana	18	1
De Pauw University, Indiana	37	0
Butler College, Indiana	20	0
University of Notre Dame, Indiana	80	10
Taylor University, Indiana	21	0
Iowa State Teachers College	98	31
Coe College, Iowa	43	0
Wartburg College, Iowa	9	7
Des Moines College, Iowa	12	2
Drake University, Iowa	31	0
Parsons College, Iowa	12	0
State University of Iowa	148	0
Cornell College, Iowa	31	8
Central University of Iowa	17	11
Morningside College, Iowa	19	3
Buena Vista College, Iowa	10	6
Midland College, Kansas	18	6
College of Emporia, Kansas	18	0
Ottawa University, Kansas	11	0
Kansas Wesleyan University	23	5
Cooper College, Kansas	10	0
Washburn College, Kansas	24	6
Southwestern College, Kansas	24	3
Ogden College, Kentucky	8	2
Centre College, Kentucky	12	0
Georgetown College, Kentucky	26	5
University of Kentucky	28	0
Transylvania College, Kentucky	26	0
University of Louisville, Kentucky	24	0
Bethel College, Kentucky	6	1
H. Sophie Newcomb Memorial College, Louisiana	29	0
Loyola University, Louisiana	10	0
Bowdoin College, Maine	28	0
Bates College, Maine	28	0
University of Maine	56	0
St. John's College, Maryland	13	2
Goucher College, Maryland	35	0
Johns Hopkins University, Maryland	49	0
Morgan College (colored), Maryland	8	5
Washington College, Maryland	9	0
Rock Hill College, Maryland	15	4
Hood College, Maryland	15	4
Maryland College for Women	11	3
Amherst College, Massachusetts	47	0
Boston University, Massachusetts	29	0
Harvard University, Massachusetts	......	
Smith College, Massachusetts	130	0
Wheaton College, Massachusetts	27	0
Mount Holyoke College, Massachusetts	88	0
Tufts College, Massachusetts	248	
Clark College, Massachusetts	28	
Alma College, Michigan	19	
University of Michigan	266	
St. John's University, Minnesota	18	
Augsburg Seminary, Minnesota	18	
Carleton College, Minnesota	35	
Hamline University, Minnesota	18	
Macalester College, Minnesota	22	
College of St. Catherine, Minnesota	35	
Gustavus Adolphus College, Minnesota	15	
College of St. Teresa, Minnesota	41	
Mississippi College	12	
Meridian College, Mississippi	17	.....
University of Mississippi	20	
Stephens College, Missouri	16	
Westminster College, Missouri	13	
William Jewell College, Missouri	16	
Park College, Missouri	19	
Lindenwood Female College, Missouri	12	
Forest Park College, Missouri	24	
St. Louis University, Missouri	26	
Washington University, Missouri	70	
Drury College, Missouri	15	
Central Wesleyan College, Missouri	23	
University of Montana	40	
Bellevue College, Nebraska	14	
Union College, Nebraska	26	
Doane College, Nebraska	18	
University of Nebraska	95	
New Hampshire College of Agriculture and Mechanic Arts	31	
College of Saint Elizabeth, New Jersey	34	
Upsala College, New Jersey	12	
University of New Mexico	20	
New York State College for Teachers	52	
Alfred University, New York	28	
St. Stephen's College, New York	9	
Wells College, New York	31	
St. Lawrence University, New York	16	
Elmira College, New York	32	
Hobart College, New York	26	
College of New Rochelle, New York	22	
Barnard College, New York	88	
Columbia University, New York	133	
College of the City of New York	142	
Hunter College of the City of New York	118	
New York University	47	
Vassar College, New York	112	
University of Rochester, New York	45	
Union University, New York	40	
University of North Carolina	52	
Davidson College, North Carolina	13	
Trinity College, North Carolina	28	
Elon College, North Carolina	27	
Guilford College, North Carolina	17	
Shaw University (colored), North Carolina	29	
Weaver College, North Carolina	8	
Salem Academy and College, North Carolina	35	
University of North Dakota	55	
Municipal University of Akron, Ohio	21	
Ohio University	36	
Baldwin-Wallace College, Ohio	19	......
Bluffton College, Ohio	16	
Cedarville College, Ohio	7	
University of Cincinnati, Ohio	236	

6.—*Faculty and number giving part time to preparatory work, 1915–16*—Contd.

Institutions.	Faculty.	Number giving part time to preparatory work.	Institutions.	Faculty.	Number giving part time to preparatory work.
Reserve University, Ohio	79	0	Converse College, South Carolina	13	0
niversity, Ohio	14	8	Wofford College, South Carolina	13	1
College, Ohio	16	....	University of South Dakota	36	2
College, Ohio	16	3	King College, Tennessee	8	2
sleyan University	59	1	University of Chattanooga, Tennessee	9	....
College, Ohio	14	0	Tusculum College, Tennessee	11	6
College, Ohio	18	0	Knoxville College (colored), Tennessee	8	8
um College, Ohio	38	5	Milligan College, Tennessee	10	1
niversity, Ohio	31	0	Tennessee College	6	2
ollege for Women, Ohio	19	0	George Peabody College for Teachers, Tennessee	100	....
College for Women, Ohio	32	0	Fisk University (colored), Tennessee	32	14
e College, Ohio	21	0	Vanderbilt University, Tennessee	35	0
de College, Ohio	10	7	University of the South, Tennessee	18	0
n University, Ohio	17	4	University of Texas	117	0
f Wooster, Ohio	32	3	Howard Payne College, Texas	7	....
st University of Oklahoma	9	2	Rice Institute, Texas	41	0
er College, Oklahoma	9	2	Austin College, Texas	10	2
ty of Oklahoma	63	0	Baylor University, Texas	66	....
College, Oregon	13	4	University of Utah	37	....
niversity, Oregon	20	0	Middlebury College, Vermont	30	0
ville College, Oregon	16	8	St. Michael's College, Vermont	11	6
ollege, Oregon	10	6	Bridgewater College, Virginia	13	2
llege, Oregon	19	0	University of Virginia	59	0
tte University, Oregon	13	....	Roanoke Institute, Virginia	8	....
a College, Pennsylvania	8	....	Emory and Henry College, Virginia	10	....
wr College, Pennsylvania	43	....	Hampden-Sidney College, Virginia	10	....
ollege, Pennsylvania	8	2	Hollins College, Virginia	12	....
ollege, Pennsylvania	24	0	Washington and Lee University, Virginia	28	0
e College, Pennsylvania	50	0	Randolph-Macon Woman's College, Virginia	46	0
vania College	26	....	Richmond College, Virginia	29	0
rd College, Pennsylvania	25	0	Virginia Union University (colored)	12	3
and Marshall College, ylvania	16	0	College of William and Mary, Virginia	15	2
University (colored), Pennia	13	0	University of Washington	124	0
y College, Pennsylvania	25	0	Spokane College, Washington	6	6
Female College, Pennsyl-	19	9	Davis and Elkins College, West Virginia	29	11
College, Pennsylvania	10	6	Lawrence College, Wisconsin	35	0
ster College, Pennsylvania	20	....	Beloit College, Wisconsin	41	0
nstitute, Pennsylvania	69	5	University of Wisconsin	283	7
ity of Pennsylvania	154	0	Milton College, Wisconsin	14	7
anna University, Pennia	23	1	Concordia College, Wisconsin	9	8
vania State College	93	0	Milwaukee-Downer College, Wisconsin	35	0
nore College, Pennsylvania	39	0	Mission House, Wisconsin	9	0
ton and Jefferson College, ylvania	32	0	Campion College, Wisconsin	15	2
burg College, Pennsylvania	11	....	Ripon College, Wisconsin	25	0
of Charleston, South Caro-	8	0	St. Clara College and Academy, Wisconsin	14	9
ia College, South Carolina	21	2			
ity of South Carolina	32	0			
University, South Caro-	11	0			

ADVANCED DEGREES OF FACULTY MEMBERS.

gested Requirement VI.—Members of the faculty of a college of nd sciences should have pursued graduate study in addition e bachelor's degree. At least one-fourth of the faculty should the degree of doctor of philosophy or degrees representing alent scholarly attainments *bestowed by reputable graduate s.* At least three-fourths of the faculty should have secured aster's degree in course at a reputable graduate school.

TABLE 7.—*Faculty—Number holding bachelor's degree, master's degree, and doctor's degree (excluding honorary degrees), 1915–16.*

Institutions.	Total number of members of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher.	Number holding doctor's degree (excluding honorary degrees).
University of Alabama	24	5	8	10
University of Arizona	28	7	10	6
Central College, Arkansas	18	6	3	1
Hendrix College, Arkansas	13	7	6	0
Pomona College, California	45	17	12	12
Occidental College, California	22	5	6	8
Mills College, California	34	11	7	5
University of Redlands, California	20	7	6	0
University of Santa Clara, California	8	....	....	....
Leland Stanford Junior University, California	145	28	37	71
University of Colorado	76	22	23	24
Colorado College	35	9	14	8
University of Denver, Colorado	31	7	11	10
Trinity College, Connecticut	25	4	9	13
Yale University, Connecticut	104	4	16	82
Gallaudet College, District of Columbia	16	4	6	2
George Washington University, District of Columbia	38	4	9	14
Howard University (colored), District of Columbia	25	12	11	2
University of Florida	17	4	2	10
Columbia College, Florida	20	6	1	1
Florida State College for Women	21	5	5	7
University of Georgia	31	3	13	13
Atlanta University (colored), Georgia	17	4	3	1
Cox College, Georgia	11	5	9	1
North Georgia Agricultural College	14	7	2	0
Agnes Scott College, Georgia	28	3	13	8
Piedmont College, Georgia	16	11	2	0
Bessie Tift College, Georgia	25	18	2	1
Brenau College, Georgia	16	6	8	1
Emory University, Georgia	16	7	4	5
Shorter College, Georgia	12	9	4	0
University of Idaho	40	14	10	11
Aurora College, Illinois	12	6	0	2
Illinois Wesleyan University	18	5	8	1
Blackburn College, Illinois	12	9	1	1
De Paul University, Illinois	20	3	12	2
Loyola University, Illinois	18	....	....	....
James Millikin University, Illinois	39	17	6	8
Knox College, Illinois	26	8	10	8
Illinois Woman's College	16	7	9	0
Lake Forest College, Illinois	20	5	7	7
Frances Shimer School, Illinois	18	8	3	1
Northwestern College, Illinois	12	2	9	1
Rockford College, Illinois	28	8	7	7
Augustana College, Illinois	14	4	6	1
Indiana University	233	28	59	55
Wabash College, Indiana	21	1	7	4
Earlham College, Indiana	34	9	12	11
Franklin College, Indiana	18	2	12	1
De Pauw University, Indiana	37	10	14	9
Butler College, Indiana	20	4	6	10
University of Notre Dame, Indiana	80	30	15	5
Taylor University, Indiana	21	10	2	2
Iowa State Teachers College	98	35	31	8
Coe College, Iowa	43	9	13	4
Wartburg College, Iowa	9	5	2	0
Des Moines College, Iowa	12	12	8	6
Drake University, Iowa	31	4	10	10
Parsons College, Iowa	12	3	8	1
State University of Iowa	148	27	51	50
Cornell College, Iowa	31	8	14	5
Central University of Iowa	17	6	6	2
Morningside College, Iowa	19	2	11	6
Buena Vista College, Iowa	10	10	3	7
Midland College, Kansas	18	4	8	2
College of Emporia, Kansas	18	5	11	1
Ottawa University, Kansas	11	3	7	1
Kansas Wesleyan University	23	1	10	1
Cooper College, Kansas	10	4	6	0
Washburn College, Kansas	24	8	12	8
Southwestern College, Kansas	24	4	8	2
Ogden College, Kentucky	8	....	3	0
Centre College, Kentucky	12	1	1	10

TABLE 7.—*Faculty—Number holding bachelor's degree, master's degree, and doctor's degree (excluding honorary degrees), 1915–16*—Continued.

Institutions.	Total number of members of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher.	Number holding doctor's degree (excluding honorary degrees).
Georgetown College, Kentucky	26	9	7	1
University of Kentucky	28	18	15	6
Transylvania College, Kentucky	26	9	9	6
University of Louisville, Kentucky	24	6	6	7
Bethel College, Kentucky	6	6	4	1
H. Sophie Newcomb Memorial College, Louisiana	29	3	9	11
Loyola University, Louisiana	10	....	....	....
Bowdoin College, Maine	28	3	12	12
Bates College, Maine	28	5	17	5
University of Maine	56	16	20	20
St. John's College, Maryland	13	2	9	16
Goucher College, Maryland	35	6	8	20
Johns Hopkins University, Maryland	49	1	1	46
Morgan College (colored), Maryland	8	4	0	2
Washington College, Maryland	9	1	4	3
Rock Hill College, Maryland	15	8	4	1
Hood College, Maryland	15	5	7	1
Maryland College for Women	11	6	1	1
Amherst College, Massachusetts	47	6	14	26
Boston University, Massachusetts	29	4	5	16
Harvard University, Massachusetts	....	....	....	....
Smith College, Massachusetts	130	21	37	55
Wheaton College, Massachusetts	27	4	6	9
Mount Holyoke College, Massachusetts	88	14	22	37
Tufts College, Massachusetts	248	4	14	11
Clark College, Massachusetts	28	3	6	18
Alma College, Michigan	19	4	7	3
University of Michigan	266	75	66	120
St. John's University, Minnesota	18	....	....	....
Augsburg Seminary, Minnesota	18	6	8	1
Carleton College, Minnesota	35	8	8	19
Hamline University, Minnesota	18	4	8	6
Macalester College, Minnesota	22	4	10	4
College of St. Catherine, Minnesota	35	11	19	7
Gustavus Adolphus College, Minnesota	15	3	3	4
College of St. Teresa, Minnesota	41	8	10	2
Mississippi College	12	3	7	2
Meridian College, Mississippi	17	16	1	0
University of Mississippi	20	3	9	8
Stephens College, Missouri	16	10	2	0
Westminister College, Missouri	13	3	7	1
William Jewell College, Missouri	16	2	6	8
Park College, Missouri	19	6	11	1
Lindenwood Female College, Missouri	12	8	2	1
Forest Park College, Missouri	24	6	11	1
St. Louis University, Missouri	26	....	2	....
Washington University, Missouri	70	16	12	10
Drury College, Missouri	15	2	6	7
Central Wesleyan College, Missouri	23	5	9	1
University of Montana	40	14	12	10
Bellevue College, Nebraska	14	7	3	2
Union College, Nebraska	26	6	6	0
Doane College, Nebraska	18	7	5	3
University of Nebraska	95	13	38	38
New Hampshire College of Agriculture and Mechanic Arts	31	18	6	4
College of St. Elizabeth, New Jersey	34	8	8	4
Upsala College, New Jersey	12	4	4	0
University of New Mexico	20	13	3	3
New York State College for Teachers	52	52	23	10
Alfred University of New York	28	8	16	2
St. Stephen's College, New York	9	3	5	1
Wells College, New York	31	7	10	9
St. Lawrence University, New York	16	4	8	3
Elmira College, New York	32	13	8	8
Hobart College, New York	26	5	11	8
College of New Rochelle, New York	22	5	5	7
Barnard College, New York	88	10	23	54
Columbia University, New York	133	17	24	90
College of the City of New York	142	33	21	70
Hunter College of the City of New York	118	28	54	16
New York University	47	9	17	21
Vassar College, New York	112	21	22	57
University of Rochester, New York	45	13	14	16
Union University, New York	40	9	15	15

TABLE 7.—*Faculty—Number holding bachelor's degree, master's degree, and doctor's degree (excluding honorary degrees), 1915–16*—Continued.

Institutions.	Total number of members of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher.	Number holding doctor's degree (excluding honorary degrees).
University of North Carolina	52	4	21	26
Davidson College, North Carolina	13	1	4	7
Trinity College, North Carolina	28	7	9	12
Elon College, North Carolina	27	5	11	4
Guilford College, North Carolina	17	9	7	1
Shaw University (colored), North Carolina	29	7	1	0
Weaver College, North Carolina	8	3	2	0
Salem Academy and College, North Carolina	35	17	2	0
University of North Dakota	55	11	15	24
Municipal University of Akron, Ohio	21	5	10	3
Ohio University	36	6	15	8
Baldwin-Wallace College, Ohio	19	4	11	4
Bluffton College, Ohio	16	9	7	4
Cedarville College, Ohio	7	7	4	3
University of Cincinnati, Ohio	236	4	18	41
Western Reserve University, Ohio	79	79	9	13
Capital University, Ohio	14	3	7	3
St. Mary College, Ohio	16	2	4	7
Defiance College, Ohio	16	4	6	4
Ohio Wesleyan University	59	15	20	17
Kenyon College, Ohio	14	1	5	8
Marietta College, Ohio	18	5	2	7
Muskingum College, Ohio	38	6	11	2
Miami University, Ohio	31	7	8	16
Oxford College for Women, Ohio	19	4	1	7
Western College for Women, Ohio	32	12	10	6
Lake Erie College, Ohio	21	6	9	3
Rio Grande College, Ohio	10	4	3	1
Otterbein University, Ohio	17	2	7	6
College of Wooster, Ohio	32	11	12	8
Methodist University of Oklahoma	9	4	3	1
Kingfisher College, Oklahoma	9	3	5	1
University of Oklahoma	63	20	24	18
Albany College, Oregon	13	1	8	2
Pacific University, Oregon	20	7	5	1
McMinnville College, Oregon	16	6	3	0
Pacific College, Oregon	10	10	0	0
Reed College, Oregon	19	3	3	12
Willamette University, Oregon	13	1	7	4
Moravian College, Pennsylvania	8	2	1	5
Bryn Mawr College, Pennsylvania	43	1	3	39
Beaver College, Pennsylvania	8	1	7	0
Wilson College, Pennsylvania	24	8	10	5
Lafayette College, Pennsylvania	50	23	11	13
Pennsylvania College	26	6	7	11
Haverford College, Pennsylvania	25	2	5	15
Franklin and Marshall College, Pennsylvania	16	2	10	4
Lincoln University (colored), Pennsylvania	13	7	5	3
Allegheny College, Pennsylvania	25	4	9	10
Irving Female College, Pennsylvania	19	2	5	1
Albright College, Pennsylvania	10	2	6	2
Westminster College, Pennsylvania	20	2	7	1
Drexel Institute, Pennsylvania	69	25	9	1
University of Pennsylvania	154	14	23	114
Susquehanna University, Pennsylvania	23	4	11	3
Pennsylvania State College	93	23	42	22
Swarthmore College, Pennsylvania	39	8	10	19
Washington and Jefferson College, Pennsylvania	32	3	7	11
Waynesburg College, Pennsylvania	11	2	8	1
College of Charleston, South Carolina	8	3	3	2
Columbia College, South Carolina	21	2	7	2
University of South Carolina	32	6	12	9
Furman University, South Carolina	11	2	3	2
Converse College, South Carolina	13	4	5	3
Wofford College, South Carolina	13	2	5	6
University of South Dakota	36	11	14	10
King College, Tennessee	8	1	6	0
University of Chattanooga, Tennessee	9	0	5	4
Tusculum College, Tennessee	11	5	2	0
Knoxville College (colored), Tennessee	8	4	4	0
Milligan College, Tennessee	10	2	5	0
Tennessee College	6	2	3	1
George Peabody College for Teachers, Tennessee	100	23	21	33

E 7.—*Faculty—Number holding bachelor's degree, master's degree, and doctor's degree (excluding honorary degrees), 1915–16*—Continued.

Institutions.	Total number of members of faculty.	Number holding only bachelor's degree.	Number holding master's degree and none higher.	Number holding doctor's degree (excluding honorary degrees).
niversity (colored), Tennessee	32	15	4	2
bilt University, Tennessee	35	9	8	18
sity of the South, Tennessee	18	3	5	9
sity of Texas	117	14	38	59
d Payne College, Texas	7	2	5	0
nstitute, Texas	41	13	9	18
College, Texas	10	3	6	1
University, Texas	66	25	10	6
sity of Utah	37	11	12	9
bury College, Vermont	30	12	14	6
hael's College, Vermont	11	7	2	0
water College, Virginia	13	5	3	3
sity of Virginia	59	10	13	21
ke Institute, Virginia	8	5	2	1
and Henry College, Virginia	10	2	4	4
den-Sidney College, Virginia	10	1	3	4
s College, Virginia	12	5	3	3
ngton and Lee University, Virginia	28	7	4	14
lph-Macon Woman's College, Virginia	46	13	10	12
ond College, Virginia	29	4	11	14
a Union University (colored)	12	8	3	1
of William and Mary, Virginia	15	3	9	3
rsity of Washington	124	25	33	61
ne College, Washington	6	4	0	0
and Elkins College, West Virginia	29	5	3	1
nce College, Wisconsin	35	7	10	16
College, Wisconsin	41	5	13	22
rsity of Wisconsin	283	48	98	138
College, Wisconsin	14	3	9	0
dia College, Wisconsin	9	0	0	1
ukee-Downer College, Wisconsin	35	8	8	4
n House, Wisconsin	9	0	3	2
on College, Wisconsin	15	10	2	0
College, Wisconsin	25	15	6	4
ra College and Academy, Wisconsin	14	7	3	1

TEACHING HOURS OF FACULTY.

Suggested Requirement VII.—Fifteen hours of teaching a w should be regarded as the maximum program of a college teacher

TABLE 8.—*Faculty—Number of teaching hours, 1915–16*

Institutions.	Faculty.	Average number of teaching hours per week for those having independent charge of classes.	Num teach more t 15 cre hour weel
University of Alabama	24	13	
University of Arizona	28	15	
Central College, Arkansas	18	13	
Hendrix College, Arkansas	13	17	
Pomona College, California	45	13	
Occidental College, California	22	15	
Mills College, California	34	13	
University of Redlands, California	20	16	
University of Santa Clara, California	8	12	......
Leland Standford Junior University, California	145	11	......
University of Colorado	76	9	
Colorado College	35	14	
University of Denver, Colorado	31	13	
Trinity College, Connecticut	25	15	
Yale University, Connecticut	104	15	......
Gallaudet College, District of Columbia	16	....	......
George Washington University, District of Columbia	38	13	
Howard University (colored), District of Columbia	25	13	
University of Florida	17	13	
Columbia College, Florida	20	24	
Florida State College for Women	21	16	......
University of Georgia	31	15	
Atlanta University (colored), Georgia	17	6	
Cox College, Georgia	11	16	
North Georgia Agricultural College	14	....	......
Agnes Scott College, Georgia	28	11	
Piedmont College, Georgia	16	15	
Bessie Tift College, Georgia	25	4	
Brenau College, Georgia	16	12	
Emory University, Georgia	16	10	
Shorter College, Georgia	12	16	
University of Idaho	40	10	
Aurora College, Illinois	12	20	
Illinois Wesleyan University	18	16	
Blackburn College, Illinois	12	15	
De Paul University, Illinois	20	10	
Loyola University, Illinois	18	10	
James Millikin University, Illinois	39	....	
Knox College, Illinois	26	11	
Illinois Woman's College	16	14	
Lake Forest College, Illinois	20	11	
Frances Shimer School, Illinois	18	20	
Northwestern College, Illinois	12	16	
Rockford College, Illinois	28	13	
Augustana College, Illinois	14	18	
Indiana University	233	13	
Wabash College, Indiana	21	15	
Earlham College, Indiana	34	12	
Franklin College, Indiana	18	10	
De Pauw University, Indiana	37	....	
Butler College, Indiana	20	15	
University of Notre Dame, Indiana	80	10	
Taylor University, Indiana	21	....	
Iowa State Teachers College	98	....	......
Coe College, Iowa	43	16	
Wartburg College, Iowa	9	20	
Des Moines College, Iowa	12	17	
Drake University, Iowa	31	15	
Parsons College, Iowa	12	13	
State University of Iowa	148	16	
Cornell College, Iowa	31	....	
Central University of Iowa	17	15	
Morningside College, Iowa	19	16	
Buena Vista College, Iowa	10	15	
Midland College, Kansas	18	17	
College of Emporia, Kansas	18	17	

TABLE 8.—*Faculty—Number of teaching hours, 1915–16*—Continued.

Institutions.	Faculty.	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week
Ottawa University. Kansas	11	17	6
Kansas Wesleyan University	23	15	6
Cooper College, Kansas	10	17	9
Washburn College, Kansas	24	15	5
Southwestern College, Kansas	24	14	3
Ogden College, Kentucky	8	20	0
Centre College of Kentucky	12	13	1
Georgetown College, Kentucky	26	12	0
University of Kentucky	28	15	7
Transylvania College, Kentucky	26	14	6
University of Louisville, Kentucky	24	....	2
Bethel College, Kentucky	6	16	3
H. Sophie Newcomb Memorial College, Louisiana	29	13	5
Loyola University, Louisiana	10	....	0
Bowdoin College, Maine	23	11	4
Bates College, Maine	28	12	0
University of Maine	56	14	3
St. John's College, Maryland	13	19	5
Goucher College, Maryland	35	....	3
Johns Hopkins University, Maryland	49	....	....
Morgan College (Colored), Maryland	8	10	1
Washington College, Maryland	9	16	5
Rock Hill College, Maryland	15	16	5
Hood College, Maryland	15	13	2
Maryland College for Women	11	20	3
Amherst College, Massachusetts	47	....	0
Boston University, Massachusetts	29	....	3
Harvard University, Massachusetts	....	....	....
Smith College, Massachusetts	130	10	1
Wheaton College, Massachusetts	27	11	0
Mount Holyoke College, Massachusetts	88	9	0
Tufts College, Massachusetts	248	10	5
Clark College, Massachusetts	28	10	1
Alma College, Michigan	19	10	4
University of Michigan	266	12	....
St. John's University, Minnesota	....	....	....
Augsburg Seminary, Minnesota	18	18	5
Carleton College, Minnesota	35	12	3
Hamline University, Minnesota	18	....	2
Macalester College, Minnesota	22	16	7
College of St. Catherine, Minnesota	35	....	3
Gustavus Adolphus College, Minnesota	15	18	11
College of St. Teresa, Minnesota	41	15	0
Mississippi College	12	....	6
Meridian College, Mississippi	17	....	....
University of Mississippi	20	14	4
Stephens College, Missouri	16	14	0
Westminster College, Missouri	13	18	0
William Jewell College, Missouri	16	15	10
Park College, Missouri	19	14	1
Lindenwood Female College, Missouri	12	13	8
Forest Park College, Missouri	24	....	0
St. Louis University, Missouri	26	11	0
Washington University, Missouri	70	11	1
Drury College, Missouri	15	14	5
Central Wesleyan College, Missouri	23	13	9
University of Montana	40	....	6
Bellevue College, Nebraska	14	17	4
Union College, Nebraska	26	20	12
Doane College, Nebraska	18	11	5
University of Nebraska	95	13	25
New Hampshire College of Agriculture and Mechanic Arts	31	13	4
College of St. Elizabeth, New Jersey	34	10	....
Upsala College, New Jersey	12	24	8
University of New Mexico	20	14	8
New York State College for Teachers	52	14	0
Alfred University, New York	28	11	0
St. Stephens College, New York	9	0	2
Wells Colleges, New York	31	13	2
St. Lawrence University, New York	16	17	7
Elmira College, New York	32	13	0
Hobart College, New York	26	14	3
College of New Rochelle, New York	22	....	....

TABLE 8.—*Faculty—Number of teaching hours, 1915–16*—Continued.

Institutions.	Faculty.	Average number of teaching hours per week for those having independent charge of classes.	Numb teachir more th 15 cred hours week.
Barnard College, New York	88	....	....
Columbia University, New York	133	....	....
College of the City of New York	142	12	
Hunter College of the City of New York	118	16	
New York University	47	....	
Vassar College, New York	112	13	
University of Rochester, New York	45	12	
Union University, New York	40	15	
University of North Carolina	52	11	
Davidson College, North Carolina	13	15	
Trinity College, North Carolina	28	12	
Elon College, North Carolina	27	....	
Guilford College, North Carolina	17	13	
Shaw University (colored), North Carolina	29	23	
Weaver College, North Carolina	8	14	
Salem Academy and College, North Carolina	35	18	
University of North Dakota	55	12	
Municipal University of Akron, Ohio	21	18	
Ohio University	36	....	
Baldwin-Wallace College, Ohio	19	16	
Bluffton College, Ohio	16	14	
Cedarville College, Ohio	7	16	
University of Cincinnati, Ohio	236	12	
Western Reserve University, Ohio	79	10	
Capital University, Ohio	14	12	
St. Mary College, Ohio	16	17	
Defiance College, Ohio	16	14	
Ohio Wesleyan University	59	12	
Kenyon College, Ohio	14	14	
Marietta College, Ohio	18	12	
Muskingum College, Ohio	38	....	
Miami University, Ohio	31	12	....
Oxford College for Women, Ohio	19	7	
Western College for Women, Ohio	32	11	
Lake Erie College, Ohio	21	12	
Rio Grande College, Ohio	10	....	
Otterbein University, Ohio	17	16	....
College of Wooster, Ohio	32	14	
Methodist University of Oklahoma	9	22	
Kingfisher College, Oklahoma	9	19	
University of Oklahoma	63	14	
Albany College, Oregon	13	12	
Pacific University, Oregon	20	13	
McMinnville College, Oregon	16	22	
Pacific College, Oregon	10	20	
Reed College, Oregon	19	....	....
Willamette University, Oregon	13	14	
Moravian College, Pennsylvania	8	20	
Bryn Mawr College, Pennsylvania	43	....	
Beaver College, Pennsylvania	8	2	
Wilson College, Pennsylvania	24	11	
Lafayette College, Pennsylvania	50	12	
Pennsylvania College	26	16	
Haverford College, Pennsylvania	25	11	
Franklin and Marshall College, Pennsylvania	16	15	
Lincoln University (colored), Pennsylvania	13	12	
Allegheny College, Pennsylvania	25	11	
Irving Female College, Pennsylvania	19	18	
Albright College, Pennsylvania	10	13	
Westminster College, Pennsylvania	20	15	
Drexel Institute, Pennsylvania	69	....	
University of Pennsylvania	154	....	
Susquehanna University, Pennsylvania	23	18	
Pennsylvania State College	93	....	....
Swarthmore College, Pennsylvania	39	11	
Washington and Jefferson College, Pennsylvania	32	10	
Waynesburg College, Pennsylvania	11	18	
College of Charleston, South Carolina	8	13	
Columbia College, South Carolina	21	16	
University of South Carolina	32	14	
Furman University, South Carolina	11	15	
Converse College, South Carolina	13	0	
Wofford College, South Carolina	13	15	

TABLE 8.—*Faculty—Number of teaching hours, 1915–16*—Continued.

Institutions.	Faculty.	Average number of teaching hours per week for those having independent charge of classes.	Number teaching more than 15 credit hours a week.
University of South Dakota	36	12	0
King College, Tennessee	8	...	5
University of Chattanooga, Tennessee	9	15	2
Tusculum College, Tennessee	11	10	1
Knoxville College (colored), Tennessee	8	18	7
Milligan College, Tennessee	10	16	0
Tennessee College	6	16	4
George Peabody College for Teachers, Tennessee	100	18	0
Fisk University (colored), Tennessee	3[illegible]	...	9
Vanderbilt University, Tennessee	35	15	0
University of the South, Tennessee	18	12	3
University of Texas	117	...	...
Howard Payne College, Texas	7	13	0
Rice Institute, Texas	41	...	...
Austin College, Texas	10	14	2
Baylor University, Texas	66	15	0
University of Utah	37	...	12
Middlebury College, Vermont	30	12	1
St. Michael's College, Vermont	11	16	3
Bridgewater College, Virginia	13	15	0
University of Virginia	59	...	6
Roanoke Institute, Virginia	8	14	8
Emory and Henry College, Virginia	10	15	0
Hampden-Sidney College, Virginia	12	11	...
Hollins College, Virginia	12	12	2
Washington and Lee University, Virginia	28	10	0
Randolph-Macon Woman's College, Virginia	46	14	1
Richmond College, Virginia	29	14	1
Virginia Union University (colored)	12	16	...
College of William and Mary, Virginia	15	13	2
University of Washington	124	11	17
Spokane College, Washington	6	30	6
Davis and Elkins College, West Virginia	29	16	7
Lawrence College, Wisconsin	35	14	0
Beloit College, Wisconsin	41	...	6
University of Wisconsin	283	10	4
Milton College, Wisconsin	14	15	6
Concordia College, Wisconsin	9	26	7
Milwaukee-Downer College, Wisconsin	35	15	5
Mission House, Wisconsin	9	25	9
Campion College, Wisconsin	15	11	...
Ripon College, Wisconsin	25	...	...
St. Clair College and Academy, Wisconsin	14	14	...

REQUIREMENTS FOR ADMISSION AND GRADUATION.

Requirements VIII and IX.—VIII. Fifteen or sixteen credit hours a week for each student for 36 weeks a year for four years should be regarded as the normal program of work for students.

IX. While heretofore 14 units of secondary work has been regarded as the acceptable minimum for admission to college, and at the time of the issuance of this inquiry represented the standard set by most standardizing agencies, there is now a general tendency to raise this requirement to 15 units. A college of arts and sciences should require 15 units for unconditional admission. In judging the reports of colleges appearing in this study, however, the prevailing standard of 1915 should be taken into account.

TABLE 9.—*Requirements for admission and graduation, 1915–16.*

Institutions.	Number of standard units required for admission.	Number of semester hours required for bachelor's degree.
University of Alabama	14	120
University of Arizona	15	127
Central College, Arkansas	14	65
Hendrix College, Arkansas	15	120
Pomona College, California	15	126
Occidental College, California	15	124
Mills College, California	15	124
University of Redlands, California	15	120
University of Santa Clara, California	16	178
Leland Stanford Junior University, California	15	120
University of Colorado	15	122
Colorado College	15	120
University of Denver, Colorado	15	124
Trinity College, Connecticut	14½	120
Yale University, Connecticut	14½	120
Gallaudet College, District of Columbia	11	139
George Washington University, District of Columbia	15	120
Howard University (colored), District of Columbia	15	120
University of Florida	15	124
Columbia College, Florida	15	128
Florida State College for Women	15	120
University of Georgia	14	132
Atlanta University (colored), Georgia	15	136
Cox College, Georgia	14	120
North Georgia Agricultural College	14	....
Agnes Scott College, Georgia	15	120
Piedmont College, Georgia	15	124
Bessie Tift College, Georgia	14	120
Brenau College, Georgia	15	120
Emory University, Georgia	14	134
Shorter College, Georgia	15	120
University of Idaho	15	128
Aurora College, Illinois	15	120
Illinois Wesleyan University	15	128
Blackburn College, Illinois	15	128
De Paul University, Illinois	15	130
Loyola University, Illinois	16	140
James Millikin University, Illinois	15	130
Knox College, Illinois	15	120
Illinois Woman's College	15	120
Lake Forest College, Illinois	16	124
Frances Shimer School, Illinois	15	(1)
Northwestern College, Illinois	15	128
Rockford College, Illinois	15	120
Augustana College, Illinois	15	120
Indiana University	16	121
Wabash College, Indiana	16	128
Earlham College, Indiana	15	120
Franklin College, Indiana	16	128
De Pauw University, Indiana	15	120
Butler College, Indiana	15	120
University of Notre Dame, Indiana	16	128
Taylor University, Indiana	15	186
Iowa State Teachers College	15	120
Coe College, Iowa	15	124
Wartburg College, Iowa	15	....
Des Moines College, Iowa	15	120
Drake University, Iowa	15	120
Parsons College, Iowa	15	120
State University of Iowa	15	120
Cornell College, Iowa	15	124
Central University of Iowa	15	128
Morningside College, Iowa	15	120
Buena Vista College, Iowa	15	120
Midland College, Kansas	15	120
College of Emporia, Kansas	15	120
Ottawa University, Kansas	15	120
Kansas Wesleyan University	15	120
Cooper College, Kansas	15	122
Washburn College, Kansas	15	120
Southwestern College, Kansas	15	120
Ogden College, Kentucky	15	120
Centre College, Kentucky	15	128
Georgetown College, Kentucky	15	128
University of Kentucky	15	120
Transylvania College, Kentucky	15	120
University of Louisville, Kentucky	16	120
Bethel College, Kentucky	15	130
H. Sophie Newcomb Memorial College, Kentucky	15	122
Loyola University, Louisiana	15	144
Bowdoin College, Maine	14½	117
Bates College, Maine	14½	122
University of Maine	14½	125

[1] Junior college.

TABLE 9.—*Requirements for admission and graduation, 1915–16*—Continued.

Institutions.	Number of standard units required for admission.	Number of semester hours required for bachelor's degree.
n's College, Maryland	14	144
r College, Maryland	15	120
Iopkins University, Mary-	15	125
College (colored), Mary-	16	128
gton College, Maryland	14	124
ill College, Maryland	14	....
ollege, Maryland	15	120
nd College for Women	13½	....
st College, Massachusetts	14	129
University, Massachusetts	15	120
d University, Massachu-	16½	....
ollege, Massachusetts	14½	120
n College, Massachusetts	15	118
Holyoke College, Massa- tts	15	120
ollege, Massachusetts	15	122
ollege, Massachusetts	15	108
ollege, Michigan	15	120
sity of Michigan	15	120
n's University, Minnesota	16	128
rg Seminary, Minnesota	15	144
n College, Minnesota	15	120
e University, Minnesota	15	120
ster College, Minnesota	15	127
of St. Catherine, Minne-	15	120
us Adolphus College, Min- a	15	130
of St. Teresa, Minnesota	16	120
ippi College	14	128
an College, Mississippi	14	120
sity of Mississippi	14	130
ns College, Missouri	15	(1)
inster College, Missouri	15	132
n Jewell College, Missouri	15	124
ollege, Missouri	15	140
wood Female College, Mis- i	15	(1)
Park College, Missouri	15	120
uis University, Missouri	16	136
ngton University, Missouri	15	120
College, Missouri	15	124
l Wesleyan College, Mis- i	16	128
rsity of Montana	15	122
ue College, Nebraska	15	128
College, Nebraska	16	160
College, Nebraska	15	124
rsity of Nebraska	15	125
Hampshire College of Agri- ure and Mechanic Arts	15	132
e of St. Elizabeth, New ey	15	132
a College, New Jersey	15	125
rsity of New Mexico	15	120
York State College for chers	15	124
University, New York	15	128
phen's College, New York	14½	128
College, New York	14½	115
awrence University, New k	15	120
a College, New York	15	120
rt College, New York	14½	120
e of New Rochelle, New k	16	144
rd College, New York	15	124
bia University, New York	14½	124
e of the City of New York	15	128
r College of the City of New k	15	120
New York University	15	126
Vassar College, New York	15½	120
University of Rochester, New York	15	184
Union University, New York	14	138
University of North Carolina	14	120
Davidson College, North Carolina	14	130
Trinity College, North Carolina	14	122
Elon College, North Carolina	14	128
Guilford College, North Carolina	14	126
Shaw University (colored) North Carolina	15	....
Weaver College, North Carolina	14	(1)
Salem Academy and College, North Carolina	14	120
University of North Dakota	15	125
Municipal University of Akron, Ohio	15	128
Ohio University	15	120
Baldwin-Wallace College, Ohio	15	120
Bluffton College, Ohio	15	120
Cedarville College, Ohio	16	120
University of Cincinnati, Ohio	16	124
Western Reserve University, Ohio	15	124
Capital University, Ohio	15	140
St. Mary College, Ohio	15	120
Defiance College, Ohio	15	120
Ohio Wesleyan University	15	120
Kenyon College, Ohio	15	128
Marietta College, Ohio	15	128
Muskingum College, Ohio	15	128
Miami University, Ohio	15	128
Oxford College for Women, Ohio	15	120
Western College for Women, Ohio	15	124
Lake Erie College, Ohio	15	120
Rio Grande College, Ohio	15	120
Otterbein University, Ohio	15	128
College of Wooster, Ohio	15	124
Methodist University of Oklahoma	15	120
Kingfisher College, Oklahoma	15	128
University of Oklahoma	15	124
Albany College, Oregon	15	120
Pacific University, Oregon	15	120
McMinnville College, Oregon	15	160
Pacific College, Oregon	15	185
Reed College, Oregon	15	....
Willamette University, Oregon	15	124
Moravian College, Pennsylvania	17½	120
Bryn Mawr College, Pennsylvania	20	120
Beaver College, Pennsylvania	15	120
Wilson College, Pennsylvania	14½	120
Lafayette College, Pennsylvania	14½	130
Pennsylvania College	15	128
Haveford College, Pennsylvania	14½	130
Franklin and Marshall College, Pennsylvania	14½	130
Lincoln University (colored), Pennsylvania	15	120
Allegheny College, Pennsylvania	15	120
Irving Female College, Pennsylvania	13	140
Albright College, Pennsylvania	16	134
Westminster College, Pennsylvania	15	120
Drexel Institute, Pennsylvania	14½	...
University of Pennsylvania	15	128
Susquehanna University, Pennsylvania	14	120
Pennsylvania State College	14	136
Swarthmore College, Pennsylvania	14½	124
Washington and Jefferson College, Pennsylvania	14½	124

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[1] Junior college.

TABLE 9.—*Requirements for admission and graduation, 1915–16*—Continued.

Institutions.	Number of standard units required for admission.	Number of semester hours required for bachelor's degree.
Waynesburg College, Pennsylvania	15	136
College of Charleston, South Carolina	14	122
Columbia College, South Carolina	14	....
University of South Carolina	11	138
Furman University, South Carolina	12	130
Converse College, South Carolina	14½	120
Wofford College, South Carolina	14	132
University of South Dakota	15	128
King College, Tennessee	14	124
University of Chattanooga, Tennessee	14½	120
Tusculum College, Tennessee	15	128
Knoxville College (colored), Tennessee	15	125
Milligan College, Tennessee	15	128
Tennessee College	14	120
George Peabody College for Teachers, Tennessee	14	186
Fisk University (colored), Tennessee	15	140
Vanderbilt University, Tennessee	14	128
University of the South, Tennessee	14	140
University of Texas	14	120
Howard Payne College, Texas	14	120
Rice Institute, Texas	14	....
Austin College, Texas	14	122
Baylor University, Texas	14	120
University of Utah	15	122
Middlebury College, Vermont	14	120
St. Michael's College, Vermont	15	104
Bridgewater College, Virginia	14	140
University of Virginia	14	120
Roanoke Institute, Virginia	15	(1)
Emory and Henry College, Virginia	14	128
Hampden-Sidney College, Virginia	14	120
Hollins College, Virginia	14	120
Washington and Lee University, Virginia	14	126
Randolph-Macon Woman's College, Virginia	15	120
Richmond College, Virginia	15	120
Virginia Union College (colored)	15	160
College of William and Mary, Virginia	14	120
University of Washington	15	120
Spokane College, Washington	16	(1)
Davis and Elkins College, West Virginia	14	128
Lawrence College, Wisconsin	15	128
Beloit College, Wisconsin	15	120
University of Wisconsin	14	120
Milton College, Wisconsin	15	128
Concordia College, Wisconsin	....	(1)
Milwaukee-Downer College, Wisconsin	15	201
Mission House, Wisconsin	15	150
Campion College, Wisconsin	16	142
Ripon College, Wisconsin	15	124
St. Clara College and Academy, Wisconsin	15	120

[1] Junior college.

MAINTENANCE OF LIBRARY AND LABORATORIES.

Suggested Requirement XIII.—At least $1,000 a year should be expended for the purchase of new books and periodicals for the library. Probably two or three times this figure would be needed to keep the library in a sound condition. A similar sum should be appropriated annually for the purchase of new equipment and apparatus for scientific laboratories.

TABLE 10.—*Expenditures for library and laboratories, 1914–15.*

Institutions.	Spent on laboratories.	Spent on library.
University of Alabama	$5,670	$3,318
University of Arizona	44,000	4,820
Central College, Arkansas	100	550
Hendrix College, Arkansas	813	628
Pomona College, California	4,594	4,885
Occidental College, California	800	475
Mills College, California	1,885	3,536
University of Redlands, California	466	836
University of Santa Clara, California	....	....
Leland Stanford Junior University, California	13,887	57,300
University of Colorado	30,000	20,800
Colorado College	$4,510	$5,489
University of Denver, Colorado	....	....
Trinity College, Connecticut	1,365	3,520
Yale University, Connecticut	114,000	88,000
Gallaudet College, District of Columbia	....	....
George Washington University, District of Columbia	2,815	1,273
Howard University (colored), District of Columbia	2,732	4,807
University of Florida	1,480	3,469
Columbia College, Florida	....	....
Florida State College for Women	3,000	4,800

TABLE 10.—*Expenditures for library and laboratories, 1914–15*—Continued.

Institutions.	Spent on laboratories.	Spent on library.
University of Georgia	$2,458	$7,982
Atlanta University (colored), Georgia	335	1,379
Cox College, Georgia	700	500
North Georgia Agricultural College	500	....
Agnes Scott College, Georgia	968	1,296
Piedmont College, Georgia	600	700
Bessie Tift College, Georgia	200	800
Brenau College, Georgia	....	....
Emory University, Georgia	1,240	1,233
Shorter College, Georgia	....	....
University of Idaho	10,326	7,708
Aurora College, Illinois	....	....
Illinois Wesleyan University	2,500	1,600
Blackburn College, Illinois	500	300
DePaul University, Illinois	305	200
Loyola University, Illinois	....	2,300
James Millikin University, Illinois	1,360	443
Knox College, Illinois	8,480	1,489
Illinois Woman's College	2,700	2,600
Lake Forest College, Illinois	6,366	5,625
Frances Shimer School, Illinois	200	225
Northwestern College, Illinois	710	1,066
Rockford College, Illinois	2,308	1,600
Augustana College, Illinois	652	4,321
Indiana University	11,206	29,105
Wabash College, Indiana	2,346	2,153
Earlham College, Indiana	5,500	3,809
Franklin College, Indiana	2,364	1,625
De Pauw University, Indiana	3,003	5,739
Butler College, Indiana	1,284	1,337
University of Notre Dame, Indiana	16,300	1,600
Taylor University, Indiana	532	350
Iowa State Teachers College	5,369	13,500
Coe College, Iowa	1,826	2,314
Wartburg College, Iowa	....	....
Des Moines College, Iowa	3,500	2,100
Drake University, Iowa	8,060	5,500
Parsons College, Iowa	1,396	1,418
State University of Iowa	42,034	28,340
Cornell College, Iowa	2,934	4,500
Central University of Iowa	398	200
Morningside College, Iowa	2,785	2,550
Buena Vista College, Iowa	438	510
Midland College, Kansas	700	1,200
College of Emporia, Kansas	6,800	2,061
Ottawa University, Kansas	1,033	1,500
Kansas Wesleyan University	800	700
Cooper College, Kansas	500	465
Washburn College, Kansas	1,747	1,950
Southwestern College, Kansas	....	....
Ogden College, Kentucky	800	300
Centre College, Kentucky	2,800	1,000
Georgetown College, Kentucky	450	500
University of Kentucky	....	....
Transylvania College, Kentucky	547	876
University of Louisville, Kentucky	2,656	1,405
Bethel College, Kentucky	122	40
H. Sophie Newcomb Memorial College, Louisiana	2,104	3,242
Loyola University, Louisiana	....	....
Bowdoin College, Maine	3,696	15,303
Bates College, Maine	1,708	2,635
University of Maine	18,400	6,310
St. Johns College, Maryland	2,092	500
Goucher College, Maryland	5,060	2,897
Johns Hopkins University, Maryland	161,402	25,236
Morgan College (colored), Maryland	260	415
Washington College, Maryland	600	600
Rock Hill College, Maryland	1,600	500
Hood College, Maryland	2,867	895
Maryland College for Women	1,096	936
Amherst College, Massachusetts	....	....
Boston University, Massachusetts	471	1,455
Harvard University, Massachusetts	....	....
Smith College, Massachusetts	$10,024	$17,858
Wheaton College, Massachusetts	2,565	1,160
Mount Holyoke College, Massachusetts	5,636	6,561
Tufts College, Massachusetts	....	....
Clark College, Massachusetts	4,300	26,600
Alma College, Michigan	1,265	1,045
University of Michigan	95,520	58,539
St. Johns University, Minnesota	....	....
Augsbury Seminary, Minnesota	200	216
Carleton College, Minnesota	3,825	3,282
Hamline University, Minnesota	2,750	3,000
Macalester College, Minnesota	1,944	2,911
College of St. Catherine, Minnesota	2,740	3,000
Gustavus Adolphus College, Minnesota	700	955
College of St. Teresa, Minnesota	....	....
Mississippi College	....	....
Meridian College, Mississippi	....	....
University of Mississippi	18,000	6,000
Stephens College, Missouri	695	1,160
Westminster College, Missouri	617	622
William Jewell College, Missouri	2,230	1,974
Park College, Missouri	910	1,527
Lindenwood College, Missouri	533	550
Forest Park College, Missouri	....	....
St. Louis University, Missouri	....	....
Washington University, Missouri	136,847	20,487
Drury College, Missouri	2,300	900
Central Wesleyan College, Missouri	700	350
University of Montana	10,355	12,669
Bellevue College, Nebraska	550	700
Union College, Nebraska	295	1,016
Doane College, Nebraska	600	827
University of Nebraska	37,000	28,320
New Hampshire College of Agriculture and Mechanic Arts	1,470	3,400
College of St. Elizabeth, New Jersey	280	650
Upsala College, New Jersey	211	87
University of New Mexico	2,750	3,700
New York State College for Teachers	9,600	2,300
Alfred University, New York	4,063	1,952
St. Stephens College, New York	500	750
Wells College, New York	1,218	7,253
St. Lawrence University, New York	....	1,537
Elmira College, New York	1,096	800
Hobart College, New York	3,000	4,200
College of New Rochelle, New York	....	....
Barnard College, New York	4,150	2,421
Columbia University, New York	60,444	94,221
College of the City of New York	26,064	3,757
Hunter College of the City of New York	3,872	8,570
New York University	6,470	4,040
Vassar College, New York	2,310	15,352
University of Rochester, New York	4,295	5,958
Union University, New York	7,282	4,351
University of North Carolina	10,582	9,615
Davidson College, North Carolina	1,525	1,700
Trinity College, North Carolina	1,443	2,148
Elon College, North Carolina	1,087	1,537
Guilford College, North Carolina	500	850
Shaw University (colored), North Carolina	....	....
Weaver College, North Carolina	....	....
Salem Academy and College, North Carolina	2,885	1,191
University of North Dakota	7,288	9,551
Municipal University of Akron, Ohio	6,851	3,434
Ohio University	8,050	8,000

TABLE 10.—*Expenditures for library and laboratories, 1914–15*—Continued.

Institutions.	Spent on laboratories.	Spent on library.
Baldwin-Wallace College, Ohio	$5,192	$784
Bluffton College, Ohio	....	1,200
Cedarville College, Ohio	415	1,000
University of Cincinnati, Ohio	21,136	8,711
Western Reserve University, Ohio	4,045	8,679
Capital University, Ohio	700	257
St. Mary College, Ohio	....	....
Defiance College, Ohio	1,066	467
Ohio Wesleyan University	4,538	7,646
Kenyon College, Ohio	1,697	1,209
Marietta College, Ohio	1,168	2,143
Muskingum College, Ohio	400	1,329
Miami University, Ohio	....	5,496
Oxford College for Women, Ohio	405	1,977
Western College for Women, Ohio	1,437	2,665
Lake Erie College, Ohio	503	2,734
Rio Grande College, Ohio	400	250
Otterbein University, Ohio	654	2,305
College of Wooster, Ohio	3,686	3,148
Methodist University of Oklahoma	380	100
Kingfisher College, Oklahoma	100	540
University of Oklahoma	17,006	7,406
Albany College, Oregon	613	1,039
Pacific University, Oregon	615	2,000
McMinnville College, Oregon	1,203	852
Pacific College, Oregon	300	550
Reed College, Oregon	3,600	5,800
Willamette University, Oregon	1,890	535
Moravian College, Pennsylvania	685	250
Bryn Mawr College, Pennsylvania	11,881	21,010
Beaver College, Pennsylvania	....	....
Wilson College, Pennsylvania	261	1,140
Lafayette College, Pennsylvania	10,100	6,443
Pennsylvania College	5,682	1,300
Haverford College, Pennsylvania	3,800	7,700
Franklin and Marshall College, Pennsylvania	2,800	1,200
Lincoln University (colored), Pennsylvania	500	400
Allegheny College, Pennsylvania	8,231	2,339
Irving Female College, Pennsylvania	....	....
Albright College, Pennsylvania	1,572	861
Westminster College, Pennsylvania	3,121	1,919
Drexel Institute, Pennsylvania	....	....
University of Pennsylvania	5,282	54,323
Susquehanna University, Pennsylvania	2,400	2,000
Pennsylvania State College	46,900	4,695
Swarthmore College, Pennsylvania	6,316	4,670
Washington and Jefferson College, Pennsylvania	2,887	2,602
Waynesburg College, Pennsylvania	....	600
College of Charleston, South Carolina	718	225
Columbia College, South Carolina	....	....
University of South Carolina	2,530	6,139
Furman University, South Carolina	....	....
Converse College, South Carolina	$461	$1,055
Wofford College, South Carolina	598	1,050
University of South Dakota	5,960	8,000
King College, Tennessee	....	....
University of Chattanooga, Tennessee	500	1,650
Tusculum College, Tennessee	1,700	625
Knoxville College (colored), Tennessee	....	....
Milligan College, Tennessee	560	450
Tennessee College	390	1,025
George Peabody College for Teachers, Tennessee	13,778	4,000
Fisk University (colored), Tennessee	530	958
Vanderbilt University, Tennessee	13,300	5,200
University of the South, Tennessee	1,641	1,071
University of Texas	15,400	32,909
Howard Payne College, Texas	3,000	3,000
Rice Institute, Texas	37,481	8,685
Austin College, Texas	1,500	600
Baylor University, Texas	2,884	4,022
University of Utah	37,000	8,410
Middlebury College, Vermont	2,463	3,942
St. Michael's College, Vermont	....	....
Bridgewater College, Virginia	490	375
University of Virginia	13,915	9,973
Roanoke Institute, Virginia	....	....
Emory and Henry College, Virginia	....	....
Hampden-Sidney College, Virginia	683	511
Hollins College, Virginia	500	1,500
Washington and Lee University, Virginia	1,204	3,104
Randolph-Macon Woman's College, Virginia	4,971	3,834
Richmond College, Virginia	2,172	2,180
Virginia Union University (colored)	250	600
College of William and Mary, Virginia	853	1,285
University of Washington	62,999	17,677
Spokane College, Washington	309	262
Davis and Elkins College, West Virginia	200	150
Lawrence College, Wisconsin	2,386	4,767
Beloit College, Wisconsin	1,996	3,719
University of Wisconsin	39,096	55,933
Milton College, Wisconsin	1,077	968
Concordia College, Wisconsin	50	225
Milwaukee-Downer College, Wisconsin	970	1,292
Mission House, Wisconsin	....	....
Campion College, Wisconsin	....	....
Ripon College, Wisconsin	1,343	2,506
St. Clara College and Academy, Wisconsin	1,525	575

RELATIVE SIZE OF FRESHMAN CLASS.

The large number of students who leave college during the freshman and sophomore years, and the small relative size of the upper classes, have constituted a serious educational and administrative problem for many years. In certain institutions 50 per cent or more of all students are members of the freshman class. It is generally admitted that this condition is detrimental to institutional tradition, ay affect the scholarly momentum of a college. The status espect to this matter of the colleges reporting is indicated in llowing table, showing the number of high-school graduates g in 1915 checked against the total collegiate student body:

1.—*Faculty, college students, and number of high school graduates entering in 1915.*

Institutions.	Faculty.	Students.			Number of high school graduates entering in 1915.		
		Men.	Women.	Total.	Men.	Women.	Total.
y of Alabama	24	406	88	494	109	16	125
y of Arizona	28	209	141	350	65	35	100
llege, Arkansas	18	0	55	55	0	16	16
ollege, Arkansas	13	244	25	269	....	....	....
ollege, California	45	241	299	540	109	120	229
l College, California	22	195	138	333	69	60	129
ge, California	34	0	187	187	....	....	....
y of Redlands, California	20	58	119	177	30	0	30
y of Santa Clara, California	8	93	0	93	19	0	19
tanford Junior University, Cali-	145	1,644	556	2,200	....	....	471
y of Colorado	76	402	448	850	188	170	358
ollege	35	173	354	527	67	125	192
y of Denver, Colorado	31	270	310	580	115	133	248
llege, Connecticut	25	235	0	235	85	0	85
ersity, Connecticut	104	1,483	0	1,483	320	0	320
College, District of Columbia	16	48	30	78	15	11	26
ashington University, District of ia	38	476	263	739	96	48	144
University (colored), District of ia	25	262	71	333	84	16	100
y of Florida	17	96	0	96	51	0	51
College, Florida	20	46	47	93	5	2	7
ate College for Women	21	0	153	153	0	74	74
y of Georgia	31	278	0	278	75	0	75
niversity (colored), Georgia	17	39	16	55	2	2	4
ge, Georgia	11	0	102	102	....	....	....
rgia Agricultural College	14	83	1	84	7	1	8
tt College, Georgia	28	0	299	299	0	132	132
College, Georgia	16	22	23	45	....	....	....
t College, Georgia	25	0	166	166	0	70	70
llege, Georgia	16	0	198	198	0	19	19
niversity, Georgia	16	244	0	244	70	0	70
llege, Georgia	12	0	160	160	....	....	....
y of Idaho	40	134	223	357	58	67	125
llege, Illinois	12	39	32	71	....	....	....
esleyan University	18	124	119	243	....	....	....
College, Illinois	12	45	27	72	....	....	....
niversity, Illinois	20	36	324	360	23	165	188
niversity, Illinois	18	121	0	121	111	0	111
likin University, Illinois	39	131	205	336	65	93	158
lege, Illinois	26	233	208	441	116	93	209
oman's College	16	0	176	176	0	85	85
st College, Illinois	20	102	92	194	38	41	79
himer School, Illinois	18	0	33	33	0	15	15
tern College, Illinois	12	160	91	251	60	49	109
College, Illinois	28	0	217	217	0	110	110
a College, Illinois	14	136	61	197	77	30	107
niversity	233	1,701	968	2,669	....	....	....
ollege, Indiana	21	334	0	334	119	0	119
ollege, Indiana	34	170	202	372	7	4	11
ollege, Indiana	18	123	131	254	55	58	113
University, Indiana	37	367	378	745	127	120	247
llege, Indiana	20	168	249	417	71	94	165
y of Notre Dame, Indiana	80	274	0	274	250	0	250
iversity, Indiana	26	65	49	114	28	15	43
e Teachers College	98	240	1,579	1,819	....	....	....
e, Iowa	43	230	257	487	100	100	200
College, Iowa	9	28	0	28	....	....	....
s College, Iowa	12	96	129	225	30	44	74
iversity, Iowa	31	260	229	489	81	42	123
llege, Iowa	12	81	74	155	42	24	66
versity of Iowa	148	812	765	1,577	316	300	616
llege, Iowa	31	234	310	544	98	106	204
niversity of Iowa	17	29	31	60	8	12	20
de College, Iowa	19	155	221	376	65	90	155
ta College, Iowa	10	29	36	65	9	13	22

TABLE 11.—*Faculty, college students, and number of high school graduates entering in 1915*—Continued.

Institutions.	Faculty.	Students.			Number of high school graduates entering in 1915.		
		Men.	Women.	Total.	Men.	Women.	Total.
Midland College, Kansas	18	45	55	100	15	12	27
College of Emporia, Kansas	18	120	123	243	53	57	110
Ottawa University, Kansas	11	94	110	204	43	38	81
Kansas Wesleyan University	23	84	90	174	31	47	78
Cooper College, Kansas	10	57	59	116	15	15	30
Washburn College, Kansas	24	196	225	421	73	88	161
Southwestern College, Kansas	24	152	124	276	....	....	....
Ogden College, Kentucky	8	50	0	50	15	0	15
Centre College, Kentucky	12	147	0	147	....	....	....
Georgetown College, Kentucky	26	157	109	266	....	....	91
University of Kentucky	28	162	156	318	....	....	....
Transylvania College, Kentucky	26	163	88	251	62	41	103
University of Louisville, Kentucky	24	129	216	345	62	69	131
Bethel College, Kentucky	6	30	0	30	16	0	16
H. Sophie Newcomb Memorial College, Louisiana	29	0	273	273	0	107	107
Loyola University, Louisiana	10	45	0	45	21	0	21
Bowdoin College, Maine	28	400	0	400	123	0	123
Bates College, Maine	28	284	188	472	102	58	160
University of Maine	56	185	81	266	57	23	80
St. John's College, Maryland	13	100	0	100	24	0	24
Goucher College, Maryland	35	0	508	508	0	204	204
Johns Hopkins University, Maryland	49	195	0	195	....	....	....
Morgan College (colored), Maryland	8	27	22	49	2	5	7
Washington College, Maryland	9	82	7	89	32	3	35
Rock Hill College, Maryland	15	40	0	40	18	0	18
Hood College, Maryland	15	0	128	128	....	....	....
Maryland College for Women	11	0	89	89	0	38	38
Amherst College, Massachusetts	47	422	0	422	....	....	....
Boston University, Massachusetts	29	104	348	452	62	169	231
Harvard University, Massachusetts	....	....	....	....	....	....	....
Smith College, Massachusetts	130	0	1,725	1,725	....	....	....
Wheaton College, Massachusetts	27	0	206	206	....	....	....
Mount Holyoke College, Massachusetts	88	0	783	783	0	229	229
Tufts College, Massachusetts	33	216	0	216	75	0	75
Clark College, Massachusetts	28	177	0	177	....	....	....
Alma College, Michigan	19	88	90	178	30	32	62
University of Michigan	266	298	1,127	1,425	....	....	....
St. John's University, Minnesota	18	200	0	200	....	....	....
Augsburg Seminary, Minnesota	18	31	0	31	4	0	4
Carleton College, Minnesota	35	211	235	446	81	85	166
Hamline University, Minnesota	18	224	194	418	108	85	193
Macalester College, Minnesota	22	159	137	296	60	63	123
College of St. Catherine, Minnesota	35	0	141	141	0	75	75
Gustavus Adolphus College, Minnesota	15	102	64	166	28	24	52
College of St. Teresa, Minnesota	41	0	104	104	....	....	....
Mississippi College	12	324	0	324	....	....	....
Meridian College, Mississippi	17	104	278	382	....	....	....
University of Mississippi	20	547	84	631	....	....	....
Stephens College, Missouri	16	0	145	145	0	74	74
Westminister College, Missouri	13	119	0	119	49	0	49
William Jewell College, Missouri	16	279	0	279	....	....	....
Park College, Missouri	19	119	142	261	55	56	111
Lindenwood College, Missouri	12	0	86	86	0	60	60
Forest Park College, Missouri	24	0	30	30	....	....	....
St. Louis University, Missouri	26	223	0	223	0	27	27
Washington University, Missouri	70	232	309	541	89	113	202
Drury College, Missouri	15	140	147	287	66	63	129
Central Wesleyan College, Missouri	23	60	35	95	18	15	33
University of Montana	40	149	238	387	61	83	144
Bellevue College, Nebraska	14	30	37	67	29	33	62
Union College, Nebraska	26	64	51	115	36	39	75
Doane College, Nebraska	18	70	63	133	31	27	58
University of Nebraska	95	940	926	1,866	371	292	664
New Hampshire College of Agriculture and Mechanic Arts	31	123	113	236	36	45	81
College of St. Elizabeth, New Jersey	34	0	110	110	0	42	42
Upsala College, New Jersey	12	8	6	14	2	2	4
University of New Mexico	20	81	66	147	33	24	57
New York State College for Teachers	52	164	855	1,019	55	260	315
Alfred University, New York	28	76	83	159	27	27	54
St. Stephen's College, New York	9	52	0	52	5	0	5
Wells College, New York	31	0	202	202	0	78	78
St. Lawrence University, New York	16	132	137	269	45	29	74
Elmira College, New York	32	0	278	278	0	93	93

11.—*Faculty, college students, and number of high school graduates entering in 1915*—Continued.

Institutions.	Faculty.	Students.			Number of high school graduates entering in 1915.		
		Men.	Women.	Total.	Men.	Women.	Total.
ollege, New York	26	138	98	236	57	30	87
New Rochelle, New York	22	0	193	193	0	60	60
College, New York	88	0	694	694	0	190	190
University, New York	133	1,256	0	1,256	357	0	357
the City of New York	142	2,229	0	2,229	546	0	546
ollege of the City of New York	118	0	1,943	1,943	0	405	405
k University	47	278	0	278	62	0	62
llege, New York	112	0	1,127	1,127	0	319	319
y of Rochester, New York	45	306	224	530	101	71	172
niversity, New York	40	521	0	521	175	0	175
y of North Carolina	52	544	5	549	146	0	146
College, North Carolina	13	357	0	357	...	...	...
ollege, North Carolina	28	428	89	517	...	...	...
lege, North Carolina	27	199	102	301	85	51	136
College, North Carolina	17	84	51	135	25	14	39
iversity (colored), North Carolina	29	88	110	198	3	0	3
ollege, North Carolina	8	27	6	33	...	...	...
ademy and College, North Carolina	35	0	189	189	0	48	48
ty of North Dakota	55	166	116	282	78	40	118
l University of Akron, Ohio	21	143	73	216	49	18	67
iversity	36	401	219	620	87	33	120
-Wallace College, Ohio	19	136	108	244	35	39	74
College, Ohio	16	52	64	116	21	31	52
le College, Ohio	7	35	33	68	8	10	18
ty of Cincinnati, Ohio	236	501	880	1,381	...	...	...
Reserve University, Ohio	79	408	435	843	...	...	...
niversity, Ohio	14	118	0	118	34	0	34
College, Ohio	16	70	0	70	23	0	23
College, Ohio	16	99	116	215	30	45	75
sleyan University	59	545	464	1,009	148	143	291
College, Ohio	14	151	0	151	52	0	52
College, Ohio	18	186	69	255	76	21	97
um College, Ohio	38	150	108	258	50	31	81
niversity, Ohio	31	339	170	509	...	...	...
ollege for Women, Ohio	19	0	188	188	0	60	60
College for Women, Ohio	32	0	263	263	0	103	103
le College, Ohio	21	0	133	133	0	54	54
ide College, Ohio	10	30	25	55	...	...	...
n University, Ohio	17	164	112	276	45	90	135
f Wooster, Ohio	32	296	215	511	115	78	193
st University of Oklahoma	9	36	28	64	14	6	20
er College, Oklahoma	9	25	16	41	6	2	8
ty of Oklahoma	63	797	776	1,573	...	...	...
ollege, Oregon	13	31	31	62	17	15	32
niversity, Oregon	20	54	53	107	17	22	39
ville College, Oregon	16	50	39	89	18	15	33
ollege, Oregon	10	22	26	48	9	17	26
llege, Oregon	19	110	147	257	...	...	...
tte University, Oregon	13	112	118	230	44	48	92
College, Pennsylvania	8	41	0	41	9	0	9
wr College, Pennsylvania	43	0	453	453	...	...	...
ollege, Pennsylvania	8	0	50	50	...	...	...
ollege, Pennsylvania	24	0	172	172	0	52	52
e College, Pennsylvania	50	477	0	477	...	...	...
vania College	26	317	14	331	112	2	114
rd College, Pennsylvania	25	186	0	186	51	0	51
and Marshall College, Pennsyl-	16	291	0	291	67	0	67
University (colored), Pennsylvania	13	163	0	163	57	0	57
y College, Pennsylvania	25	241	164	405	84	54	138
emale College, Pennsylvania	19	0	31	31	...	...	...
College, Pennsylvania	10	131	28	159	15	7	22
ster College, Pennsylvania	20	108	84	192	34	26	60
nstitute, Pennsylvania	69	150	391	541	26	177	203
ty of Pennsylvania	154	638	380	1,018	...	...	...
anna University, Pennsylvania	23	128	28	156	37	5	42
vania State College	93	332	42	374	231	12	243
nore College, Pennsylvania	39	127	237	364	46	70	116
ton and Jefferson College, Pennsyl-	32	333	0	333	...	...	...
burg College, Pennsylvania	11	49	55	104	17	17	34
f Charleston, South Carolina	8	80	0	80	29	0	29
a College, South Carolina	21	0	123	123	0	70	70

TABLE 11.—*Faculty, college students, and number of high school graduates entering in 1915*—Continued.

Institutions.	Faculty.	Students.			Number of high school graduates entering in 1915.		
		Men.	Women.	Total.	Men.	Women.	Total.
University of South Carolina	32	323	32	355	124	11	135
Furman University, South Carolina	11	205	0	205	......	......	......
Converse College, South Carolina	13	0	153	153	......	......	......
Wofford College, South Carolina	13	324	0	324	86	0	86
University of South Dakota	36	150	223	373	36	63	99
King College, Tennessee	8	60	0	60	......	......	......
University of Chattanooga, Tennessee	9	108	77	185	......	......	......
Tusculum College, Tennessee	11	45	48	93	......	......	......
Knoxville College (colored), Tennessee	8	26	15	41	18	8	26
Milligan College, Tennessee	10	98	42	140	12	10	22
Tennessee College	6	0	94	94	0	48	48
George Peabody College for Teachers, Tennessee	100	413	1,099	1,512	......	......	......
Fisk University (colored), Tennessee	32	95	84	179	18	14	32
Vanderbilt University, Tennessee	35	260	72	332	131	27	158
University of the South, Tennessee	18	160	0	160	......	......	......
University of Texas	117	882	811	1,693	275	237	512
Howard Payne College, Texas	7	65	49	114	21	19	40
Rice Institute, Texas	41	264	119	383	......	......	......
Austin College, Texas	10	108	0	108	36	0	36
Baylor University, Texas	66	243	268	511	......	......	......
University of Utah	37	764	838	1,602	......	......	......
Middlebury College, Vermont	30	187	156	343	67	50	117
St. Michael's College, Vermont	11	20	0	20	4	0	4
Bridgewater College, Virginia	13	42	30	72	8	11	19
University of Virginia	59	523	0	523	151	0	151
Roanoke Institute, Virginia	8	31	0	31	0	8	8
Emory and Henry College, Virginia	10	176	0	176	......	......	......
Hampden-Sidney College, Virginia	10	118	0	118	38	0	38
Hollins College, Virginia	12	0	106	106	0	45	45
Washington and Lee University, Virginia	28	369	0	369	116	0	116
Randolph-Macon Woman's College, Virginia	46	0	624	624	0	241	241
Richmond College, Virginia	29	268	117	385	77	45	122
Virginia Union University (colored)	12	62	7	69	22	6	28
College of William and Mary, Virginia	15	178	0	178	50	0	50
University of Washington	124	813	1,042	1,855	243	364	607
Spokane College, Washington	6	2	8	10	2	6	8
Davis and Elkins College, West Virginia	29	34	22	56	10	10	20
Lawrence College, Wisconsin	35	294	270	564	131	121	252
Beloit College, Wisconsin	41	246	142	388	115	43	158
University of Wisconsin	283	1,692	1,109	2,801	507	320	827
Milton College, Wisconsin	14	33	39	72	14	15	29
Concordia College, Wisconsin	9	54	0	54	......	......	......
Milwaukee-Downer College, Wisconsin	35	0	234	234	0	96	96
Mission-House, Wisconsin	9	38	1	39	4	0	4
Campion College, Wisconsin	15	80	0	80	18	0	18
Ripon College, Wisconsin	25	165	94	259	......	......	......
St. Clara College and Academy, Wisconsin	14	0	69	69	0	30	30

EXPENSE OF ADMINISTRATION.

Uncertainty exists as to the proportion of the annual income which may properly be spent for administration. The committee does not venture to suggest a standard. It submits the following table, however, for the general information of college officers:

TABLE 12.—*Income and expenditures for administration, including handling of institution's fund, 1914–15.*

Institutions.	Income.	Expenditures for administration.
University of Alabama	$210,421	$13,075
University of Arizona	423,021	9,559
Central College, Arkansas	29,193	4,000
Hendrix College, Arkansas	39,966	6,847
Pomona College, California	347,133	17,224
Occidental College, California	50,727	7,803
Mills College, California	80,774	8,268
University of Redlands, California	50,505	16,178
University of Santa Clara, California	274,200	....
Leland Stanford Junior University, California	1,235,891	44,532
University of Colorado	300,436	23,000
Colorado College	148,887	9,890
University of Denver, Colorado	140,000	....
Trinity College, Connecticut	83,835	10,812
Yale University, Connecticut	1,777,134	114,000
Galladet College, District of Columbia	....	....
George Washington University, District of Columbia	220,954	17,141
Howard University (colored), District of Columbia	203,964	15,980
University of Florida	170,297	6,100
Columbia College, Florida	....	9,576
Florida State College for Women	97,885	....
University of Georgia	286,302	12,628
Atlanta University (colored), Georgia	62,927	6,637
Cox College, Georgia	31,000	5,000
North Georgia Agricultural College	38,700	1,500
Agnes Scott College, Georgia	94,711	8,109
Piedmont College, Georgia	34,719	34,000
Bessie Tift College, Georgia	56,000	22,400
Brenau College, Georgia	151,860	18,873
Emory University, Georgia	....	2,167
Shorter College, Georgia	70,560	....
University of Idaho	264,867	17,180
Aurora College, Illinois	....	....
Illinois Wesleyan University	49,851	12,570
Blackburn College, Illinois	14,618	200
De Paul University, Illinois	53,434	....
Loyola University, Illinois	....	....
James Milikin University, Illinois	96,588	10,798
Knox College, Illinois	71,155	7,814
Illinois Woman's College	104,984	16,021
Lake Forest College, Illinois	216,153	5,535
Frances Shimer School, Illinois	43,823	2,350
Northwestern College, Illinois	40,082	2,353
Rockford College, Illinois	92,189	13,858
Augustana College, Illinois	99,914	5,052
Indiana University	615,000	33,984
Wabash College, Indiana	57,702	3,567
Earlham College, Indiana	117,551	17,000
Franklin College, Indiana	48,253	6,052
De Pauw University, Indiana	127,726	14,950
Butler College, Indiana	45,314	7,583
University of Notre Dame, Indiana	....	....
Taylor University, Indiana	47,135	1,675
Iowa State Teachers College	331,865	22,346
Coe College, Iowa	63,452	6,800
Wartburg College, Iowa	19,797	....
Des Moines College, Iowa	51,229	3,000
Drake University, Iowa	189,718	10,000
Parsons College, Iowa	38,217	4,718
State University of Iowa	986,513	28,313
Cornell College, Iowa	132,079	10,393
Central University of Iowa	18,850	1,500
Morningside College, Iowa	46,344	6,000
Buena Vista College, Iowa	20,072	3,000
Midland College, Kansas	$25,000	$2,500
College of Emporia, Kansas	36,549	4,135
Ottawa University, Kansas	38,978	3,489
Kansas Wesleyan University	20,045	250
Cooper College, Kansas	21,453	....
Washburn College, Kansas	78,753	8,608
Southwestern College, Kansas	43,615	5,792
Ogden College, Kentucky	11,018	12,000
Centre College, Kentucky	....	3,000
Georgetown College, Kentucky	41,215	5,900
University of Kentucky	321,062	11,620
Transylvania College, Kentucky	41,270	4,154
University of Louisville, Kentucky	79,250	1,360
Bethel College, Kentucky	12,490	1,542
H. Sophie Newcomb Memorial College, Louisiana	166,936	9,095
Loyola University, Louisiana	....	....
Bowdoin College, Maine	151,563	6,850
Bates College, Maine	89,809	9,371
University of Maine	364,042	11,308
St. John's College, Maryland	53,000	750
Goucher College, Maryland	212,569	11,520
Johns Hopkins University, Maryland	628,830	20,817
Morgan College (colored), Maryland	34,213	1,900
Washington College, Maryland	62,795	700
Rock Hill College, Maryland	26,000	24,000
Hood College, Maryland	71,840	1,605
Maryland College for Women	....	....
Amherst College, Massachusetts	221,817	....
Boston University, Massachusetts	222,474	2,612
Harvard University, Massachusetts	3,019,602	92,683
Smith College, Massachusetts	736,734	37,058
Wheaton College, Massachusetts	119,676	8,240
Mount Holyoke College, Massachusetts	336,998	233,083
Tufts College, Massachusetts	301,955	....
Clark College, Massachusetts	85,250	6,680
Alma College, Michigan	54,673	2,800
University of Michigan	2,321,241	126,651
St. John's University, Minnesota	71,145	....
Augsburg Seminary, Minn	21,007	1,500
Carleton College, Minnesota	204,584	13,946
Hamline University, Minnesota	63,264	8,415
Macalester College, Minnesota	55,796	5,846
College of St. Catherine, Minnesota	....	8,000
Gustavus Adolphus College, Minnesota	42,295	2,760
College of St. Teresa, Minnesota	72,500	....
Mississippi College	60,293	....
Meridian College, Mississippi	....	....
University of Mississippi	269,500	9,000
Stephens College, Missouri	49,000	4,411
Westminster College, Missouri	....	3,030
William Jewell College, Missouri	84,047	8,016
Park College, Missouri	91,708	....
Lindenwood College, Missouri	128,307	550
Forest Park College, Missouri	....	....
St. Louis University, Missouri	....	....
Washington University, Missouri	716,471	17,838
Drury College, Missouri	54,084	5,225
Central Wesleyan College, Missouri	24,607	2,000
University of Montana	*215,945	16,925
Bellevue College, Nebraska	36,155	7,000
Union College, Nebraska	66,159	3,783
Doane College, Nebraska	45,448	3,742

TABLE 12.—*Income and expenditures for administration, including handling of institution's fund, 1914–15*—Continued.

Institutions.	Income.	Expenditures for administration.
University of Nebraska	$1,368,039	$106,807
New Hampshire College of Agriculture and Mechanic Arts	273,236	12,000
College of St. Elizabeth, New Jersey	48,675	....
Upsala College, New Jersey	13,158	1,210
University of New Mexico	62,577	800
New York State College for Teachers	110,103	5,700
Alfred University, New York	36,307	6,724
St. Stephen's College, New York	48,592	35,000
Wells College, New York	146,774	10,213
St. Lawrence University, New York	236,341	3,711
Elmira College, New York	104,543	....
Hobart College, New York	125,890	15,000
College of New Rochelle, New York	70,289	....
Barnard College, New York	262,423	15,211
Columbia University, New York	4,204,937	1,407,745
College of the City of New York	526,108	17,336
Hunter College of the City of New York	550,124	51,390
New York University	630,415	1,894
Vassar College, New York	774,613	36,745
University of Rochester, New York	139,996	22,959
Union University, New York	140,117	8,692
University of North Carolina	261,658	9,430
Davidson College, North Carolina	51,830	6,000
Trinity College, North Carolina	118,829	12,498
Elon College, North Carolina	52,686	3,050
Guilford College, North Carolina	43,600	1,200
Shaw University (colored), North Carolina	37,257	....
Weaver College, North Carolina	....	....
Salem Academy and College, North Carolina	113,367	....
University of North Dakota	268,947	26,981
Municipal University of Akron, Ohio	65,833	6,949
Ohio University	419,250	13,380
Baldwin-Wallace College, Ohio	46,447	2,417
Bluffton College, Ohio	10,456	....
Cedarville College, Ohio	7,708	933
University of Cincinnati, Ohio	867,985	44,714
Western Reserve University, Ohio	438,278	....
Capital University, Ohio	24,883	2,200
St. Mary College, Ohio	....	....
Defiance College, Ohio	41,688	2,600
Ohio Wesleyan University	145,300	16,149
Kenyon College, Ohio	66,841	4,750
Marietta College, Ohio	42,929	7,000
Muskinghum College, Ohio	50,016	5,813
Miami University, Ohio	328,734	9,217
Oxford College for Women, Ohio	53,127	7,438
Western College for Women, Ohio	112,384	8,850
Lake Erie College, Ohio	76,189	12,336
Rio Grande College, Ohio	8,200	1,000
Otterbein University, Ohio	59,196	3,824
College of Wooster, Ohio	210,004	10,045
Methodist University of Oklahoma	14,315	3,215
Kingfisher College, Oklahoma	17,268	511
University of Oklahoma	231,147	35,306
Albany College, Oregon	22,225	3,409
Pacific University, Oregon	31,802	4,852
McMinnville College, Oregon	27,247	7,020
Pacific College, Oregon	7,500	3,482
Reed College, Oregon	122,850	6,000
Willamette University, Oregon	$39,080	$5,540
Moravian College, Pennsylvania	33,402	....
Bryn Mawr College, Pennsylvania	280,562	28,653
Beaver College, Pennsylvania	24,667	3,408
Wilson College, Pennsylvania	65,416	8,370
Lafayette College, Pennsylvania	130,484	5,070
Pennsylvania College	65,000	6,760
Haverford College, Pennsylvania	160,588	9,950
Franklin and Marshall College, Pennsylvania	47,705	6,631
Lincoln University (colored), Pennsylvania	35,951	1,462
Allegheny College, Pennsylvania	102,568	8,527
Irving Female College, Pennsylvania	35,541	1,000
Albright College, Pennsylvania	41,487	2,200
Westminster College, Pennsylvania	69,914	....
Drexel Institute, Pennsylvania	95,138	....
University of Pennsylvania	1,738,088	599,735
Susquehanna University, Pennsylvania	31,600	4,000
Pennsylvania State College	941,309	50,502
Swarthmore College, Pennsylvania	227,009	17,602
Washington and Jefferson College, Pennsylvania	68,941	9,900
Waynesburg College, Pennsylvania	20,685	2,250
College of Charleston, South Carolina	22,102	1,500
University of South Carolina	142,227	30,200
Furman University, South Carolina	49,447	....
Columbia College, South Carolina	....	....
Converse College, South Carolina	74,567	5,458
Wofford College, South Carolina	39,578	3,375
University of South Dakota	194,772	7,920
King College, Tennessee	....	....
University of Chattanooga, Tennessee	49,917	5,500
Tusculum College, Tennessee	64,011	4,625
Knoxville College (colored), Tennessee	41,580	2,314
Milligan College, Tennessee	....	12,500
Tennessee College	52,536	12,178
George Peabody College for Teachers, Tennessee	169,243	13,328
Fisk University (colored), Tennessee	54,242	8,070
Vanderbilt University, Tennessee	268,292	109,000
University of the South, Tennessee	131,736	9,838
University of Texas	602,609	31,373
Howard Payne College, Texas	22,000	....
Rice Institute, Texas	529,000	27,035
Austin College, Texas	82,880	....
Baylor University, Texas	148,919	15,181
University of Utah	241,919	9,300
Middlebury College, Vermont	126,925	10,965
St. Michael's College, Vermont	22,450	....
Bridgewater College, Virginia	25,414	....
University of Virginia	444,315	33,241
Roanoke Institute, Virginia	....	....
Emory and Henry College, Virginia	53,254	....
Hampden-Sidney College, Virginia	25,712	2,789

TABLE 12.—*Income and expenditures for administration, including handling of institution's fund, 1914–15*—Continued.

Institutions.	Income.	Expenditures for administration.	Institutions.	Income.	Expenditures for administration.
Hollins College, Virginia	$107,489	$9,261	Lawrence College, Wisconsin	$110,566	$6,082
Washington and Lee University, Virginia	104,759	16,292	Beloit College, Wisconsin	138,298	15,118
Randolph-Macon Women's College, Virginia	202,900	9,737	University of Wisconsin	2,767,701	121,518
Richmond College, Virginia	....	9,357	Milton College, Wisconsin	20,835	244
Virginia Union University (colored)	38,113	500	Concordia College, Wisconsin	28,455	....
College of William and Mary, Virginia	53,550	3,560	Milwaukee - Downer College, Wisconsin	131,164	10,654
University of Washington	564,804	50,988	Mission-House, Wisconsin	....	....
Spokane College, Washington	....	8,400	Campion College, Wisconsin	65,770	....
Davis and Elkins College, West Virginia	16,600	4,089	Ripon College, Wisconsin	60,784	47,611
			St. Clara College and Academy, Wisconsin	35,134	....

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 31

THE EDUCATIONAL SYSTEM OF SOUTH DAKOTA

REPORT OF A SURVEY MADE UNDER THE DIRECTION
OF THE UNITED STATES COMMISSIONER OF EDUCATION

WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

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LETTER OF TRANSMITTAL.

Department of the Interior,
Bureau of Education,
Washington, October 21, 1918.

Sir: I am submitting herewith for publication as a bulletin of the Bureau of Education the manuscript of the report of a survey of the educational system of the State of South Dakota, made under my direction at the request of the South Dakota Educational Survey Commission created by the legislature of the State, as set forth in the body of this report. The survey includes the State and local educational organization and administration in South Dakota; the elementary and secondary schools of the State and the preparation of teachers for these schools; and the higher educational institutions of the State, including the University of South Dakota, the State College of Agriculture and Mechanic Arts, the State School of Mines, the four State normal schools, and such accredited private colleges and schools for special classes as it was found necessary to include to make this a comprehensive study of the entire educational system of the State.

The survey was made by Dr. H. W. Foght, specialist in rural school practice, who had charge of the field work and the preparation of the manuscript; Dr. Samuel P. Capen, specialist in higher education; Mrs. Henrietta W. Calvin, specialist in home economics; Dr. Chester D. Jarvis, specialist in agricultural education; Miss Edith A. Lathrop, assistant in rural education; Dr. H. B. Wilson, superintendent of schools, Topeka, Kans.; Dr. William F. Russell, dean of the school of education, University of Iowa; and Dr. Alexander J. Inglis, professor of secondary education, Harvard University. The report and conclusions of the committee were approved by me and were transmitted to the South Dakota Educational Survey Commission June 16, 1918.

Accompanying this report is a brief report by the South Dakota Survey Commission to the Governor of the State, approving and accepting in full the conclusions of the survey committee.

Respectfully submitted.

P. P. Claxton,
Commissioner.

The Secretary of the Interior.

REPORT AND RECOMMENDATIONS OF THE SOUTH DAKOTA EDUCATIONAL SURVEY COMMISSION.

In these days when efficiency is demanded of every person and organization, the more progressive States have begun to ascertain whether all is being done to make their schools as effective and efficient as possible, as the best means of meeting the crisis of reconstruction that is certain to come to the average American State at the close of the world war.

The Legislature of South Dakota, being desirous of keeping the State in the vanguard educationally and believing that the strength and weakness of the present educational system can best be disclosed by careful survey of the educational departments and institutions of the State, in its fifteenth legislative session, 1917, passed the following act:

(S. B. 130) Chapter 226, 1917 Session Laws.

AN ACT Providing for a State educational survey and appropriating money therefor.

Be it enacted by the Legislature of the State of South Dakota:

SECTION 1. The governor shall appoint a commission of three members, all of whom shall serve without compensation, to make a survey of the public educational system of South Dakota, including all schools and educational institutions supported by public funds, to determine the efficiency of the same, and to report its findings with recommendations for increased efficiency and economy to the governor on or before July 1, 1918.

SECTION 2. The said commission shall employ an expert or experts nominated by and to work under the direction of the United States Bureau of Education, who shall not be residents of the State of South Dakota, to make such survey, and shall supply such assistants and equipment as shall be necessary. The said commission shall, after consulting with the United States Bureau of Education, fix the compensation of such expert or experts and assistants.

SECTION 3. The said commission and its employees shall have free access to all public records. All public school and educational institutions, teachers, instructors, faculties, officers, and employees shall furnish all information and assistance in their power to and in making such survey. The members of said commission, experts or assistants, shall have the production of papers and records and are hereby empowered to administer oaths. In case any person summoned by any member of such commission, experts, or assistants shall fail or refuse to obey such process or to testify before such commission, experts, or assistants, the said commission, experts, or assistants may apply to the circuit courts of this State to compel obedience and testimony, and the circuit courts are hereby empowered to enforce obedience to such process.

SECTION 4. The said commission shall, in addition to other work specified by this act, direct special attention to the matter of the number of available teachers in the State, their qualifications and to the feasibility and advisability of consolidating any of the existing State educational institutions or departments thereof.

SECTION 5. There is hereby appropriated out of any money in the treasury not otherwise appropriated the sum of $6,500, or so much thereof as may be necessary, for the purpose of defraying the cost of such survey as is hereinbefore provided, including the personal traveling expenses of members of said commission in connection therewith, which money shall be paid upon warrants of the State auditor issued upon vouchers duly approved by the State superintendent of public instruction: *Provided*, That in no case shall the total expense of such survey exceed the sum of $6,500.

SECTION 6. An emergency is hereby declared to exist, and this act shall be in force and effect from and after its passage and approval.

In accordance with this law, Gov. Norbeck on September 6, 1917, appointed as members of the State educational commission Mr. A. M. Anderson, of Sturgis; Mr. C. E. Swanson, of Sisseton; and Miss Ruth E. Sabin, of Lake Andes. The first meeting of the survey commission was held at Pierre, October 6, 1917, at which time plans for the survey, outlined by Dr. P. P. Claxton, United States Commissioner of Education, were discussed and adopted. A second meeting was held at Sioux Falls, November 27, 1917. In this meeting the Commissioner of Education was represented by Dr. Harold W. Foght, specialist in rural school practice in the Bureau of Education, who further outlined the plans of procedure and presented to the commission the list of educational experts appointed by the Commissioner of Education for the survey. The survey committee, comprising five Bureau of Education experts and three additional experts from different States and educational institutions, were formally accepted by the survey commission. They were:

Dr. Harold W. Foght, specialist in rural school practice, in charge of the survey.
Dr. Samuel P. Capen, specialist in higher education.
Mrs. Henrietta W. Calvin, specialist in home economics.
Dr. Chester D. Jarvis, specialist in agricultural education.
Miss Edith A. Lathrop, assistant in rural education.

Assisted by the following educational experts:

Dr. H. B. Wilson, superintendent of schools, Topeka, Kans.
Dr. William F. Russell, dean of the school of education, University of Iowa.
Dr. Alexander J. Inglis, professor of secondary education, Harvard University.

A final conference was held at Pierre from June 16 to 18. In addition to the members of the State commission there were present the presidents of the State's higher educational institutions and the presidents of the accredited denominational colleges, the State superintendent of public instruction, the State historian, and others professionally interested in the conference. The final report of the Commissioner of Education was made at this meeting by Dr. Harold W. Foght, of the Bureau of Education.

After thorough discussion and careful consideration the survey commission unanimously accepted all but one of the recommendations made by the survey experts. This one exception was the section referring to the disposal of the school of mines. Upon this section (substitute recommendation 1, chapter 20) Mr. Swanson and Miss Sabin voted to accept the recommendation made by the survey experts, and Mr. Anderson voted no.

The State survey commission urge upon the governor and the sixteenth legislative assembly that the administrative and legislative plans and recommendations laid down in the body of this report be enacted into law at the earliest opportunity or shaped into administrative policy by the State board of regents and other boards and the State department of public instruction.

To the end, finally, that the legislative recommendations may be enacted into law, the commission recommends that the following amendments to the constitution be adopted at the present session:

1. Amend section 3 of article 14 of the constitution to enlarge the powers and duties of the State board of regents of education.
2. Constitutional amendment providing that the legislature may determine the method of selecting the State superintendent of public instruction and county superintendents of schools, and fixing their qualifications, compensation, tenure of office, and powers and duties, anything in the constitution to the contrary notwithstanding.
3. Amendment to section 3 of article 8 of the constitution to provide that the interest and income of the school fund shall be apportioned to the school districts on the basis of aggregate daily attendance of pupils and the number of teachers employed.
4. Amend sections 1, 2, and 3 of article 14 of the constitution to relieve the State board of charities and corrections of the control of the State School for the Blind, the State School for the Deaf and the State Training School, and to place these institutions under the control of the State board of regents of education, anything in the constitution to the contrary notwithstanding.

The commission desires to express its appreciation of the generous and whole-hearted help given the work by the State superintendent of public instruction, the State historian, the heads of educational institutions, the county superintendents and teachers throughout the State; and to Dr. P. P. Claxton, United States Commissioner of Education, for the painstaking and thoroughgoing survey of education made under his direction, and particularly to Dr. Harold W. Foght, who had charge of the field work and the general preparation of the report, for his untiring efforts and courtesy.

Respectfully submitted.

RUTH E. SABIN,
C. E. SWANSON,
A. M. ANDERSON.

INTRODUCTORY.

Steps leading to the survey.—The present educational survey of South Dakota is the direct result of a demand by the people of the State for a school system to meet in every way the modern requirements of organized, efficient industrial life, as it is lived in the great agricultural Commonwealths of the United States. There has been a deep-seated public feeling that the schools of the State—especially the rural schools—have not kept pace with the economic development of this great agricultural State. The people of South Dakota seem determined that the young State shall not allow itself to become afflicted with the extreme conservatism and inertness that have sometimes shown themselves in the older sections of the country.

This desire has found expression in the present survey of the educational system of the State. The State Teacher Association of South Dakota has repeatedly gone on record in favor of educational improvement. In 1915 the association appointed a committee of educators to create sentiment in favor of a school survey. The work thus begun culminated in the survey act of 1917, which is given in full in the preceding report of the State survey commission. The proposed survey was strongly indorsed by the Hon. Frank M. Byrne, retiring governor, and the Hon. Peter Norbeck, present governor of the State. It had also the hearty indorsement of the State superintendent of public instruction, superintendents and teachers of the State, and of farmers' organizations, business men's clubs, and women's clubs throughout the State.

The act contains the following provisions:

1. The actual work of the survey shall be done by or under the direction of the United States Bureau of Education.

2. The State commission and the survey experts shall have free access to all public records.

3. The State commission and survey experts shall have the assistance of all public schools and other educational institutions, teachers, officers, and employees.

It was further agreed by the State commission and the Commissioner of Education that the survey report should be published as a bulletin by the Bureau of Education.

Organization of the field work.—Immediately after its organization at Pierre, October 6, 1917, the State survey commission called upon the Bureau of Education to furnish the expert assistance agreed upon and to take charge of the survey. The Commissioner of Education immediately took steps to organize the necessary staff, which began its preliminary study in December, 1917, by placing in the hands of supervising officers, public-school teachers, and faculties of the higher educational institutions questionnaires and other outlines to procure such data as could not be procured from State records or in other ways. The actual field work began early in January and continued till late in March.

Dr. H. W. Foght had general charge of the field work and preparation of the manuscript. He spent 70 days on work in the field, studying particularly State and local school organization, administration, and supervision; school statistics; school support; preparation of public-school teachers; and school consolidation and rural high schools. He prepared the following chapters of the report: I to VIII, inclusive; XI, XVII to XIX, inclusive; and XXI.

Drs. Samuel P. Capen, Alexander J. Inglis, Chester D. Jarvis, and Mrs. Henrietta W. Calvin made a searching study of all the higher educational institutions in the State, which it is hoped may be published by the bureau as a separate bulletin. A condensed form of this study appears as Chapter XX in this report.

Mrs. Henrietta W. Calvin studied home economics as a phase of the entire educational system and prepared Chapter XIII and portions of other chapters. She devoted 45 days to field study.

Miss Edith A. Lathrop spent 70 days in the State devoting the time to survey of rural and village schools. She prepared Chapters X; XII, and XIV.

Dr. H. B. Wilson gave his time to town and city schools, which study is embodied in Chapter XV.

Dr. Willam F. Russell surveyed the high schools of the State and made a study of financial maintenance of the normal schools. In this study he had the assistance of several members of the faculty of the school of education, University of Iowa. The high-school study forms Chapter XVI of the report.

Dr. Walton C. John, specialist in charge of land-grant statistics in the Bureau of Education, prepared Chapter IX, on school support, in cooperation with Dr. Foght; he also prepared several sections of the report on higher education.

Acknowledgment.—The bureau survey committee wishes to acknowledge its obligation to the members of the State survey commission for their many courtesies and hearty cooperation throughout the study; to the State department of public instruction for valuable help in procuring and compiling educational statistics; to the State historian for valuable documentary information; and to the heads of the State's higher educational institutions and the private colleges and the county and city superintendents and the teachers of the State for valuable advice and constant cooperation.

THE EDUCATIONAL SYSTEM OF SOUTH DAKOTA.

Chapter I.

SOUTH DAKOTA, THE LAND AND PEOPLE.

General topography.—South Dakota is a mighty domain, measuring 380 miles from east to west and 248 miles from north to south. It has a total area of 77,615 square miles, of which 76,868 square miles are land and 747 are water surface. In size it ranks as fourteenth among the States of the Union.

Excepting the Black Hills region, the State is a great rolling plain—the eastern portion forming a part of the lower prairie-plains section, the western lying in the Great Plains. The land rises gradually from an altitude of about 1,000 feet along the eastern border to 3,500 feet in the west, culminating with an altitude of 7,242 feet (Harney Park) in the great domelike Black Hills. The mean elevation is nearly 2,200 feet.

The Missouri River divides the State into two sections of almost equal size but greatly divergent in topographical features. The eastern half has been scoured down by the ancient ice sheet, which has left it gently rolling and traversed by two flat river valleys with somewhat higher intervening watersheds. In the northeast of this section lies the Coteau de Prairies, a ridge of low moraine hills, which form the watershed between South Dakota and Minnesota. This section is dotted with small lakes of glacial origin. Southward lies the fertile James River Valley—the remains of the ancient "Dakota Lake," and the Great Sioux Valley. West of these fertile valleys lies the Coteau du Missouri, a hill region with a mean elevation of about 1,800 feet. This ridge forms the watershed between the Missouri and the James. The soil of the eastern section is a deep alluvial loam overlaid with a rich vegetable mould. This half of the State is therefore particularly well adapted for diversified agriculture.

The land west of the Missouri is rugged and broken by stream erosion. The continental ice sheet left it untouched, by reason of which this part of the State has a most perfect drainage system, being gullied deep by shallow streams, giving it a highly broken contour of plateau lands cut by steep narrow valleys, weird towering buttes, and, in the extreme southwest, the picturesque Bad Lands, or Terres Mauvaises of the early French voyajeur. The latter are still in a state of soil erosion, so that much of it is devoid of vegetation and practically useless. Finally, on the western border, lie the Black Hills, a great mountain uplift 125 miles long and 60 miles wide.

The great plains west of the Missouri are best adapted for grazing purposes. The soil is composed of a variety of clays overlaid with some alluvial loam, but lacking in vegetable mould. By reason of their higher altitude, certain areas in the western half of the State have an insufficient annual rainfall to assure the farmer of good crops. Dry farming is utilized successfully, and, wherever practicable, irrigation is resorted to. The most notable project of this kind is on the Belle Fourche River in the northern spurs of the Black Hills, where 100,000 acres have been reclaimed by irrigation.

South Dakota has a continental climate with great extremes of temperature. In summer the temperature often rises above 100° Fahrenheit, and in winter occasionally falls to more than 40° below zero. But, fortunately, the dryness of the atmosphere mitigates these extremes and renders the climate, on the whole, invigorating and pleasant.

The amount of rainfall has been a great determining factor in the life and occupations of the people. The average rainfall is about 20 inches, being upward of 28 inches in the eastern third, 17 to 28 inches in center, and 12 to 17 inches in the western third, which latter is insufficient to assure crops. The middle section suffers from occasional droughts, and never produces such abundant crops as are common to the eastern third of the State. The eastern half of South Dakota is a natural agricultural region. The plains west of the Missouri are a natural grazing region which should be devoted in the main to stock raising. The Black Hills region offers a variety of occupations, such as mining, lumbering, stock raising, fruit growing, and agriculture under irrigation.

Economic and industrial conditions.—Of the entire population, 78½ per cent live in the open country and in rural villages of less than 1,000 population, and gain their livelihood directly from the land. Only 125,404 persons, or 21.5 per cent (1915), live in places of more than 1,000 population. Fully three-fourths of the people of South Dakota may, therefore, be classed as rural population, whose chief occupation is agriculture and stock raising. Gold and silver mining and lumbering are minor occupations, limited to the Black Hills. Stone quarrying is also a profitable occupation in limited areas. A variety of manufacturing industries engage a small portion of the people in the larger towns and cities. But, after all, agricul-

s the chief industry, about which all the other occupations
e as subsidiary.

le 1 contains an enumeration of persons over 10 years of age
engaged in useful occupations. The chief occupations alone
cluded:

TABLE 1.—*Occupations of population.*

	1,081	Stationary engineers	680
ral laborers	1,214	Farmers	96,726
	1,277	Housewives	118,110
:hs	1,027	Common laborers	19,532
ers	738	Machinists	1,023
s	1,841	Masons	745
n	916	Merchants	6,849
rs	836	Miners	1,910
al travelers	319	Nurses	741
	302	Officials	1,349
ers	887	Painters	1,050
	109	Railway employees	2,589
ns	124	Salesmen	2,863
	5,913	Servants	4,219
hers	978	Stockmen	2,418

he top of the list numerically stands housewifery, with a total
,110. Next come farmers with 96,726, to which group might
perly added agricultural laborers and certain others enumer-
nder sundry occupations. The group designated as stockmen
ted to "ranchmen" in the larger sense. This number is small,
lso the group devoted to mining.

icultural development.—The total land area in acres is
,520, of which 23,820,436 acres were in farms in 1915, as
t 16,442,322 in farms in 1905. The total number of farms was
4 in 1915, and the average size per farm 235 acres, as against
farms in 1905, with the average size per farm 314 acres.
lone is there a tendency to reduce the size per farm, but the
e of improved farms has increased from 15,827,208 in 1910 to
,770 acres in 1915. A large proportion of the farms is still
ed by their owners, although this class unfortunately has in-
d only slightly during the last five-year period. The tenant
r, on the other hand, is increasing rapidly, as may be ascer-
from Table 2. This is an unfortunate circumstance which can
remedied until life in the open country becomes stabilized
h a new kind of educated leadership, culminating in more
ome, complete living in agricultural communities than is now
le.

TABLE 2.—*Agricultural development by years.*

	1915	1910	1905
ate, in acres	49,195,520	....	....
arms	23,820,436	26,016,892	16,442,322
roved	23,552,770	15,827,208	....
f farms	101,224	77,644	52,376
ze, in acres	235	335	314
by owners	59,989	57,948	30,322
by tenants	41,235	19,231	22,050

The farmers of the State are becoming well-to-do, some of them wealthy. Many of the latter class are retiring to the larger towns and cities, where the educational facilities and social opportunities are greater than in the open country. The production of new wealth from the land is quite marked. Thus in 1908 the production in grain, hay, fruits, live stock, dairy products, wool and hides, etc., reached a total of $185,434,000; in 1917 the value of the production from the soil amounted to $465,350,000, or an average of $4,498 produced by each farm during the year, a very large average as compared with other States.

The production of wealth is not uniformly distributed over the 101,224 farms. The average for the eastern half of the State is far above that of the western half. Where production of ordinary farm crops is attempted in the semi-arid western and northwestern sections, the net income is often very small. These folk must be kept in mind when discussing school education of these regions, in later chapters.

A good idea of this unequal distribution of wealth or ability to produce new wealth, acre for acre, may be ascertained by studying the accompanying map issued by the South Dakota tax commission. It gives the assessed land valuation by years.

Distribution and racial composition of the population.—According to the State census taken May 1, 1915, South Dakota has a population of 582,765, a decrease of 1,123 persons from the Federal Census of 1910. Table 3 shows a substantial growth in population since 1890, when it totaled 348,600.

TABLE 3.—*Urban and rural population, 1890–1915.*

Census year.	Population.			Per cent of total population.	
	Urban.	Rural.	Total.	Urban.	Rural.
1890	28,555	320,045	348,600	8.2	91.8
1900	40,936	360,634	401,570	10.2	89.8
1910	76,673	507,215	583,888	13.1	86.9
1915	84,762	498,003	582,765	14.5	85.5

The per cent of population, urban and rural, has changed from 8.2 urban and 91.8 rural in 1890 to 14.5 urban and 85.5 rural in 1915.[1] However, on the basis of aggregate increase, urban centers have added only 56,207 during the 25-year period, while rural districts have increased 234,165.

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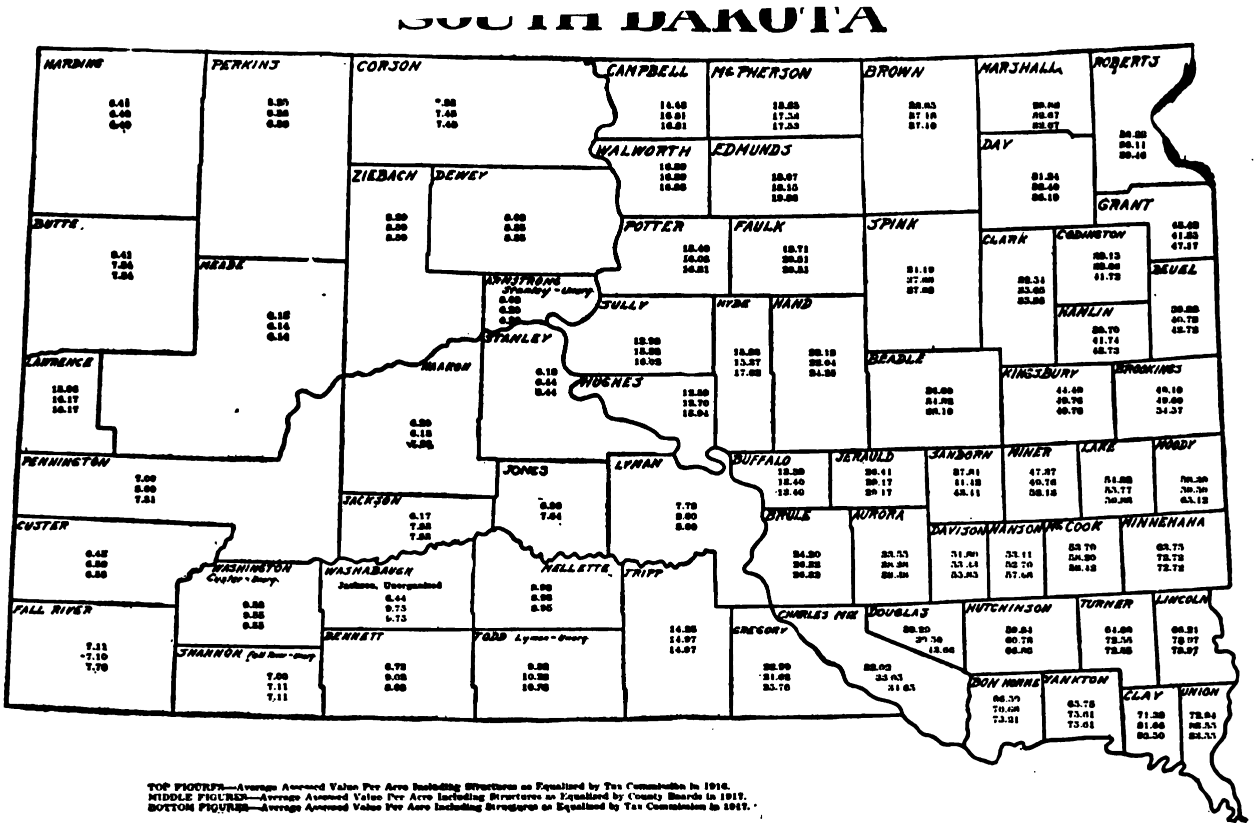
[1] In this statement the population of cities of 2,500 and over are counted as urban.



TOP FIGURES—Average Assessed Value Per Acre Including Structures as Equalized by Tax Commission in 1916.
MIDDLE FIGURES—Average Assessed Value Per Acre Including Structures as Equalized by County Boards in 1917.
BOTTOM FIGURES—Average Assessed Value Per Acre Including Structures as Equalized by Tax Commission in 1917.

FIG. 1.

The slight drop in population since 1910—

> is due to the fact that the census of 1910 was taken when the homestead movement into the trans-Missouri region was at the crest. In a great measure the homesteaders who located at that time did not remain to till the lands but left them after securing title from the Government.[1]

Under the definition of urban and rural as used by the Federal Census Office, South Dakota would have only 18 urban centers, i. e., places of more than 2,500 population. However, for the convenience of the present survey the State's own classification has been adopted. This classes as urban all places of more than 1,000 population, everything else being rated as rural. The latter classification gives the State six cities ranging downward in population from 21,000 to 5,000; 10 cities from 5,000 to 2,000; and 23 places of less than 2,000 and above 1,000 population.

Racial composition of the population.—Only 15.5 per cent of the people now living in the State are foreign born. Foreign immigration has practically ceased. The immigrants of recent years have come in the main from other American States, very few coming direct from overseas. The percentage of foreign born to the whole population has declined, decade by decade, since 1880, as follows: 1870, 31.7 per cent; 1880, 34 per cent; 1890, 27.6 per cent; 1900, 22 per cent; 1910, 17.5 per cent; 1915, 15.5 per cent.

Of the foreign-born population now in the State over 56 per cent have resided in the United States more than 20 years, and over 43 per cent have resided in South Dakota more than 20 years. Finally, less than 10 per cent of South Dakota's foreign-born population have resided in the United States less than 5 years. From this it appears that the problem of the foreign born and the question of final assimilation and Americanization should not have been of serious consideration had the commonwealth always been alert, and through school education and in other ways had hastened the Americanization of these aliens.

Figure 2 shows graphically the race origin of the people who dwell in South Dakota. It is based on the third census of South Dakota. The classification is based on ethnic or ancestral origin instead of political allegiance, as is usually followed in the Federal census. All are classed as American who "come from families so long settled that knowledge of foreign origin has been lost." It will be noted that the ethnic group marked "German" ranks second to the "American" only. This includes many thousand German-Russians who in the Federal census are classed as "Russian."

The assimilation process of the foreign elements in the population has been retarded because the foreign born have gathered largely in settlements, some of them extending over several counties. Some counties, Hutchinson for example, are largely peopled by German stock. A large portion of the school population attend German Catholic or German Lutheran parochial schools in which German has been used largely as a medium of instruction.[1] In this county and in Hanson County the German-Russian Mennonites still live the quaint community life brought with them from Russia. German, not English, is the language of the villages, although in most of the schools English is the medium of instruction. The German-Russians have settled chiefly in the north-central and northwestern parts of the State, where they have spread over many counties. Because

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[1] Third census of the State of South Dakota, p. 12.

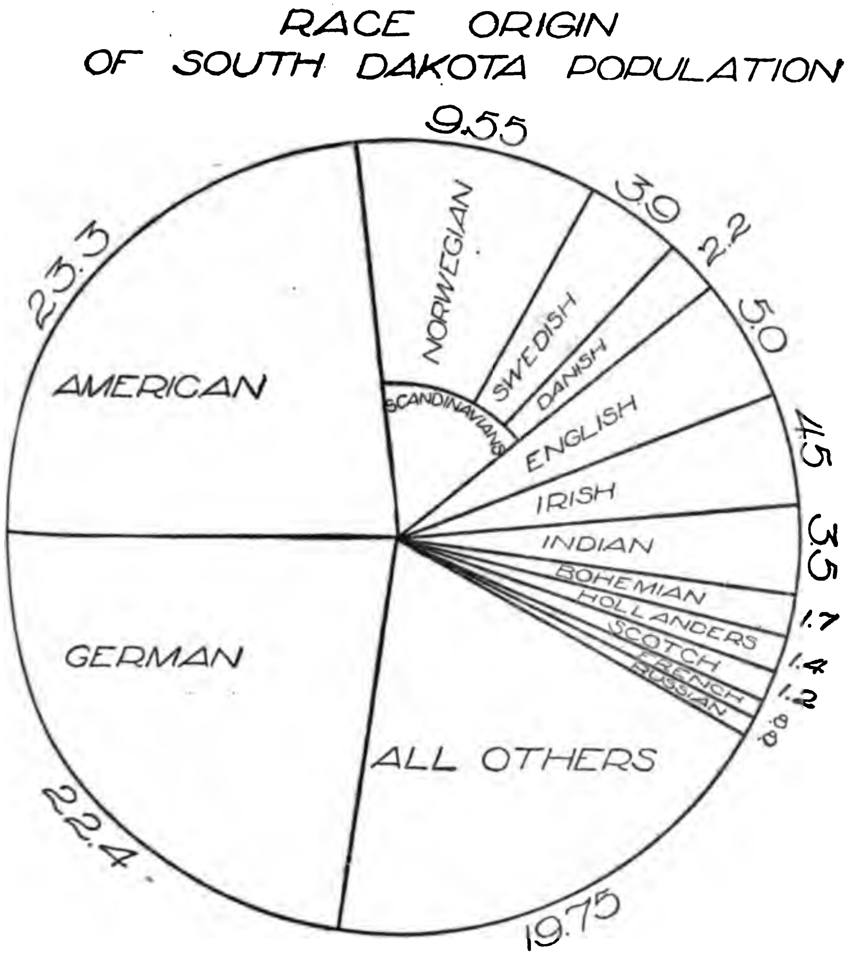

FIG. 2.

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[1] Recently stopped by order of the State council of defense.

of numbers, more than for other reasons, have these people been slow to become Americanized. Scandinavians and Swedish Finns comprise a large per cent of the population. They settled the State at an early date and became possessed of the best land; from the first they have taken a leading part in the political and economic life of the State. By reason of their close kinship to people of Anglo-American origin, in tradition, history, and ideals, they are easily Americanized and so form no special problem.

Illiteracy and school education.—The Federal census of 1910 places the number of illiterates in the State 10 years of age and over at 12,750, or 2.9 per cent of the total population. However, only 0.4 per cent of the native whites are classed as illiterates, and 5 per cent of the foreign-born whites. More than one-half of the persons included above as illiterates were Indians and therefore were wards of the National Government. They should not have been included. The State census of 1915, on the other hand, gives the total number of white illiterates, native and foreign born, at 3,134, or 0.72 per cent of the whole population. This places South Dakota close to the first rank in low per cent of illiteracy.

Whatever of illiteracy there is seems limited to a few of the older settlers of foreign origin and to some youth that grew up in comparative poverty in the days of early settlement. In some sections a condition of "near illiteracy" prevails, due to the scattered homesteading west of the Missouri River, with long distance to nearest school, bad roads and severe winters. Conditions like these are found in all pioneer communities. They must be met and remedied through the organization of a new type of school education, quite different from the system that now prevails.

A study of the whole population above 18 years of age—i. e., 340,124 people—discloses the fact that 296,052 persons have had at least an elementary school education; 27,345 have attended high school; 3,178 have attended or have graduated from normal school; 7,371 have had some college education; and 5,006 are college and university graduates.[1]

Wealth of South Dakota: How well it is utilized for educational purposes.—South Dakota is a State of thrifty, well-to-do middle class people; it has few poor people and few of great means. Wealth is equitably distributed. For a comparatively young commonwealth the State makes an excellent showing. In 1915 the assessed valuation of all classes of property reached the great sum of $1,271,573,249, or an average of $2,182.01 for each man, woman, and child in the State. On the basis of estimated actual valuation it would amount to

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[1] See Third Census of South Dakota, p. 48.

$4,386.48 per capita. On a fair estimate basis this would amount to $4,970.89 per capita, an increase of $584.41 per capita in two years.

The bank deposits in the State increased from $14,732,983.71 in 1900 and $87,783,967.78 in 1910 to $179,822,797.37 in 1917. There is no better evidence of prosperity than this. In 1917, furthermore, the gross production from all South Dakota farms amounted to $457,350,000, or about $4,355 of gross wealth produced for each farm in the State.

The total resources available for the education of each child in the State, 5 to 18 years of age, is (1917) $11,821. This average amount is exceeded by six States in the Union only. But the State's actual investment in public school education is not so satisfactory. As appears in Table 4, South Dakota ranks as thirteenth among the North Central and Western States in actual school expenditure on a per capita basis of the total population, and (Table 5) as nineteenth, on a school population basis. This calculation is based on the 23 North Central and Western States only. The State thus ranks in the lower half of the list. From this it may be concluded that the State has not in the past utilized its great resources for educational investment as fully as most of the States of the Middle West and West. It is fair to assume, finally, that the rich young State will be willing to invest much more in school education in years to come, provided it can be shown that the investment is made in the right type of education.

TABLE 4.—*Amount expended on public schools per capita of total population (1915–16)—North Central and Western States only.*

1. Montana	$14.14	*13. South Dakota*	*$8.23*
2. California	10.93	14. Oregon	8.04
3. Arizona	10.44	15. Wyoming	8.01
4. Utah	10.33	16. Ohio	7.89
5. North Dakota	10.25	17. Michigan	7.88
6. Idaho	9.65	18. Colorado	7.83
7. Iowa	9.35	19. Nevada	7.18
8. Minnesota	9.17	20. Illinois	7.15
9. Washington	8.53	21. Wisconsin	6.67
10. Indiana	8.53	22. Missouri	5.21
11. Nebraska	8.51	23. New Mexico	4.86
12. Kansas	8.41	United States	6.28

TABLE 5.—*Amount expended on public schools for each child 5 to 18 years of age (1915–16)—North Central and Western States only.*

1. Montana	$65.71	13. Minnesota	$33.87
2. California	56.24	14. Colorado	33.46
3. Nevada	43.73	15. Ohio	33.37
4. Arizona	42.60	16. Michigan	32.03
5. Washington	38.91	17. Kansas	31.79
6. Wyoming	38.81	18. Nebraska	31.37
7. Oregon	36.61	*19. South Dakota*	*29.73*
8. Idaho	36.55	20. Illinois	29.07
9. North Dakota	36.43	21. Wisconsin	24.30
10. Iowa	35.60	22. Missouri	19.97
11. Utah	35.51	23. New Mexico	16.76
12. Indiana	34.13	United States	23.87

Chapter II.

FUNDAMENTAL EDUCATIONAL NEEDS OF THE STAT

The salient facts brought out briefly in the foregoing pages ind
cate in a general way the educational needs of South Dakota. Th
State is primarily agricultural. The soil is the foundation and mai
stay of its wealth. The three-fourths of the population living on th
land are, in the last analysis, the chief wealth makers of the Co
monwealth. Their capacity for leadership, their ability to produc
scientifically from the land, and their native desire for wholesom
happy living on the land will be determined chiefly by the kind o
school education provided by a thoughtful Government.

The population is largely native born, though a majority come o
foreign ancestry. They are a heterogeneous people, who have, in ad
dition to their native American traits and traditions, a great inheri
ance from foreign shores. With fair appreciation and utilizatio
these double gifts may be expected to produce a Commonwealth o
loftiest ideals and successful in material ways. As a whole the pe
ple are upstanding and forward-looking, with a fair margin o
wealth. Poverty is practically unknown. Most of the farmers ow
the land they till; tenant farming is not yet, at least, much of
menace. Democratic ideals prevail; ability and thrift are the cr
teria by which men's worth is measured. Such a people offers th
best opportunity for a universal education of high standards, cul
tural, scientific, and practical. This calls for an efficient system o
modern school education. The highest cultural level must be mai
tained, for without appreciation for the noble and beautiful in lif
and without ability to think and act for oneself, real democracy i
impossible. Similarly, the life and occupations of the people mus
be made to reflect modern science and business efficiency, if they a
to have a happy, wholesome existence in the open country, in tow
and in city.

Determining factors in a modern educational system.—An efficie
school system, whether in South Dakota or elsewhere, should b
planned to enable the people to get the greatest good out of life fo
themselves and their fellow men. Does the type of education pr
vided keep the people in the enjoyment of good health and sanita
surroundings? Do the schools teach the children and their parent
the great responsibilities and opportunities as members of the great

social group—the community and State? Do they prepare people to earn a good living on the land and in the industrial centers? Do the schools instruct people in such a way that they will dedicate their wealth and leisure to ethical and esthetical pursuits, to improve themselves and help upbuild the community and the race?

This conception of modern education is more comprehensive than the old. The whole farm place with all its many interests becomes an important part of it. The city's industrial activities are utilized. The business man, the bank president, the shop foreman, the practical scientist, the expert accountant, and the housewife are all concerned in this modern education; they are accordingly consulted to help make the school a vital factor in everyday life.

Agricultural life, the great determining factor in South Dakota education.—It is assumed that the three-fourths of the population living under rural conditions are eager to bring about an era of real scientific farming. This kind of farming goes hand in hand with intelligent, educated leadership. To produce such leadership, in good measure, there must be set up in rural districts distinctive community schools in every way equipped to help the rural population to wholesome, joyous living on the land. This kind of school is yet practically unknown in South Dakota.

But the study of agriculture should not be limited to the men who plow, and sow, and reap. Whatever the people who live in the towns and cities of South Dakota accomplish toward success in life is sure to depend largely on the agricultural prosperity with which they are surrounded. In agricultural States one does not always find the bond of sympathy and understanding there should be between town and country people. This operates to the loss of all classes. School education can be of help here also. Secondary schools in incorporated towns and cities should offer practical courses in agriculture, in rural sociology, and farm economics. This would ultimately place agriculture on the high plane which it should occupy in the esteem of all South Dakota people.

Chapter III.

OUTLINE OF THE PRESENT EDUCATIONAL SYSTEM.

This chapter contains a brief statement of the most important phases of the present educational system, and is intended as a basis for the discussion in later chapters of this report. The topics included are: State boards and departments, county supervision, school district organization, the public school system, school maintenance, teaching staff and teacher certification, normal schools and professional preparation of teachers, and higher institutions of learning.

State boards and departments.—Public education in South Dakota is administered through four distinct departments or boards: (1) The State department of public instruction; (2) the State board of regents of education; (3) the State board of charities and corrections; and (4) the State board of education.

(1) *The State department of public instruction* is presided over by a superintendent of public instruction. His administrative functions are defined by the laws of the State. They embrace "general supervision of all the county schools and high schools, and of all the city and county superintendents of the State." This article of the code is comprehensive and would give the State superintendent the requisite power to determine the general outlines of a liberal State administration of public education were it not that he is in other respects limited through statute particularization and hampered for lack of financial support, short office tenure, and party politics.

(2) *The State board of regents of education.*—The control of the higher educational institutions of the State—the university, the college of agriculture, the school of mines, and the four normal schools—is vested in a board of five regents, appointed by the governor and ratified by the senate. The regents of education are a body corporate charged with managing the property of the State schools and with administering their educational affairs. The regents are empowered to delegate provisionally to the presidents and faculties of the schools such of the authority given them by law as they may deem wise. The regents constitute a perpetual body clothed with liberal authority. They are chosen from the prevailing political parties and receive compensation for their services. This board has always upheld the best traditions of the State by attracting to its

service only men of known probity, wisdom, and honor. In practice, unfortunately, there is no link between this important body and the State superintendent of public instruction, who is not even an ex officio member of the regents, although he is by law charged with certificating all graduates of the State schools who expect to become public school teachers.

(3) *The State board of charities and corrections*, as indicated in the name, is charged with management of the State penal and charitable institutions—the penitentiary, the two asylums for the insane, the industrial school, the school for the deaf, and the school for the blind. This board, like the regents, is composed of five members appointed by the governor with the consent of the senate. They are renumerated for their services and hold office for a term of six years. The most important function of this board also is educational. The schools for the deaf and blind are exclusively educational and need most expert supervision; the industrial school likewise is organized to teach wayward boys and girls to become good members of society. Even the penal institution and the asylums for the insane have educational features which demand expert professional attention. In some progressive States the charitable and corrective institutions are placed under the same educational direction as the other educational institutions. As now organized the State board of charities and corrections is not an educational board in the professional sense.

(4) *The State board of education* is of recent origin. It was organized by the last legislature, to comply with the requirements of the Smith-Hughes Act. The State superintendent of public instruction is the ex officio president of the board; the other members are the presidents of the university and the college of agriculture, and four persons appointed by the governor, "two of whom shall be members of a State normal school, one a superintendent or a principal of a city or town school, and one a county superintendent." The term of office is four years. The members of the board receive no remuneration for their services. This board has all the necessary power to cooperate with the Federal Board for Vocational Education in the administration of the powers of the vocational education act.

County supervision.—The county is the unit of school supervision for all except independent school districts, which provide their own local superintendents. The county superintendency is political rather than professional. The superintendent is elected at the regular biennial election for a two-year period and can not by law hold the office more than two consecutive terms. His compensation ranges from $900 to $2,000 per annum, with not to exceed $400 for necessary traveling expenses. In counties having more than 75 schools the superintendent may appoint a deputy or clerk.

The county superintendent is "charged with the general supervision of the schools in his county. In towns having less than 1,000 inhabitants he shall have authority of direct supervision." He visits schools, keeps records of schools and reports the same to the State superintendent annually; he issues special certificates between periods of State examinations, holds teachers' conventions, annual institutes, summer schools, and annual meetings of school trustees; he encourages reading circle work, industrial exhibits, and in sundry other ways promotes education in his county. In practice he has little real authority in guiding the educational interests of the county, the effective unit of administration being in practice the school district and the district board.

School district organization.—The exact number of school districts in the State can not be ascertained, although it is approximately 4,500, with 5,011 one-teacher rural and 287 independent and consolidated schools. In organization the South Dakota districts are unique, ranging, as they do, in size from a single schoolhouse district to a whole county with many schools. Each unorganized county constitutes a single school district; organized counties are divided into school districts along township lines, i. e., into township districts of one or more congressional townships; and township districts are subdivided into smaller local districts whenever there is a popular demand for such subdivision. A number of counties have been subdivided into these ineffective, small one-school districts; others are wholly organized as township districts; and still others have a mixture of small districts and township districts. As now organized, none of these organizations is wholly satisfactory, as will appear in a later chapter.

Every school district, not an independent district, is administered by a board of three members, elected at the annual school meeting, who hold office for three years. This small board manages all local school matters within certain legal limitations and under instructions from the annual school meeting. The boards employ teachers, determine the length of the school year, and prescribe what subjects may be taught in addition to those determined by law—in a word, they have full charge of the school, and on their ability as administrators depends the success or failure of the county schools.

All cities, towns, and adjacent territory are organized as independent districts and are governed under special legislative provisions. Such districts are administered by larger boards of education and have, for the most part, their own superintendents of schools.

The public school system.—South Dakota has a free school system of 16 years or more, embracing 8 years in elementary school, 4 years in secondary school, and 4 or more years in the University of South Dakota, or courses of varying length in the State College of Agriculture and Mechanic Arts, the State School of Mines, and the State normal schools.

The 5,298 rural schools are practically all elementary schools, 86,785 of their pupils attending the grades, with only 2,057 in high school. In independent districts there are 35,827 pupils in elementary schools and 9,467 in high schools. A large majority of rural children of secondary school age either do not obtain high-school instruction at all, or they are obliged to attend town schools. Township high schools may be organized under law, open to all children of school age in the school township; but very little advantage has been taken of this opportunity to establish secondary schools within reach of all children.

Some progress has been made recently in the reorganization of the 12-year school plan. A number of the larger towns and cities have begun to plan the schools on the "six-and-six" plan and are making good strides in organizing junior and senior high schools.

School maintenance.—The public schools draw their support from several sources. The most important of these is local taxes, levied on all taxable property within the school districts. In 1916, 76.14 per cent of all school revenues expended during the year came from local taxes. The income on the State permanent fund of nearly $14,000,000 is a second source of revenue. This produces a considerable portion of the school maintenance. Certain other sources—to be defined in later sections—produce the balance of the school revenue. In 1916, 17.85 per cent of the total public school maintenance came from the State permanent fund, and 6.01 per cent from "other sources."

The State's higher educational institutions are supported by direct legislative appropriations, from the income on endowment lands held in trust by the State, and in case of certain of the institutions, from Federal appropriations.

South Dakota levies no regular State tax for the public schools; nor does the State levy a permanent millage tax as a permanent endowment for its higher educational institutions.

Teaching staff and teacher certification.—It requires more than 7,000 teachers to fill the teaching positions in the public elementary and secondary schools of the State. Of this number 5,374 are needed (1916) in "common" school districts and 1,683 in independent districts. The teaching staff varies in academic and professional preparation from practically no preparation at all to college and university graduation, together with good training preparation in normal school or school of education. Public education in the State suffers, as is true of many other States, because the schools are manned largely by immature persons of meager preparation and limited professional outlook. Conditions which were bad enough before the war have become accentuated in recent months, and now call for serious consideration by lawmakers and parents.

Teacher certification, in this State, is controlled through the State department of education, which has charge of the examinations, grades the papers, and issues the certificates. The only exception to this rule is in case of the so-called special certificates issued by county superintendents to candidates "who present proof that they were unable to be present at the last regular public examination." Such certificates are valid only until the next regular examination is held.

Professional preparation of teachers.—The State maintains normal schools at Aberdeen, Madison, Spearfish, and Springfield, which supply about 450 teachers[1] annually for the public schools of the State. The school of education in the university and the department of education in the State college prepare about 25[1] annually. Accredited denominational colleges furnish another 200,[1] which makes the annual output from all these schools 675.[1] The annual wastage in the teaching profession is, however, so large that other States and sources must be drawn upon to supply large numbers to fill vacancies.

There can be no real professionalizing the profession before all teachers are required by law to complete courses in the normal schools or other professional institutions. This will require the normal schools to enlarge their output greatly, or that the efforts of the normal schools be supplemented by teacher training in high schools or from other sources.

Higher institutions of learning.—South Dakota supports three higher educational institutions, not including the normal schools. They are the University of South Dakota, at Vermillion; the State College of Agriculture and Mechanic Arts, at Brookings; and the State School of Mines, at Rapid City. Unfortunately all these schools are situated on or near the borders of the State, and are not easily accessible.

There are in the State also a number of well-established denominational colleges and academies that have done great service in the State during its formative period. Many of the colleges are fully accredited by the State department of education, with legal authority to grant teachers' certificates. The following are on the accredited list: Augustana College, at Canton; Dakota Wesleyan University, at Mitchell; Huron College, at Huron; Yankton College, at Yankton; Lutheran Normal School, at Sioux Falls; Sioux Falls College, at Sioux Falls; and Wessington Springs Junior College, at Wessington Springs. The following academies are accredited to grant lower grade certificates: Notre Dame Academy, at Mitchell; and Ward Academy, at Academy.

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[1] This includes graduates only.

Chapter IV.

GENERAL STATE ADMINISTRATION OF EDUCATION.

The superintendent of public instruction is the chief educational official in most of our States. He is charged with enforcing the educational law in spirit and in fact; he is the professional adviser of the supervisory and instructional staff of the State. In a word, he organizes and directs the educational forces within his State. The State superintendency is a big man's or a big woman's job. It is hard to conceive of a more important office, or a more difficult position, if one takes into consideration the legal and other limitations usually met with in the average western Commonwealth. At all times it calls for a person of great tact, good initiative, and much executive ability.

The State superintendency in South Dakota weakened by legal limitations.—In this State the office of superintendent is limited in its administrative efficiency by constitutional and legal provisions. The office is not popularly considered the highly important position that it is. It is a political office; the salary is limited by the constitution to $1,800 per annum; and the term of office, while not fixed by law, is limited by custom to four and, occasionally, to six years.

To leave this professional office to the caprice of party politics is, to say the least, unwise. Many of the strongest professional educators would not care to enter a contest for the office, if for no other reason, because an election is not always determined by professional fitness, but often by aptness in vote-getting. The superintendency should be removed from politics and be made appointive.

Moreover, the short term of service keeps many from seeking the office. Progress in education requires a continuous policy, not limited by short tenure or subject to the accidents of politics. The office should be held subject to good behavior, and the incumbent should be removed for good cause only.

The salary is limited by the constitution to $1,800 per annum. Fifty dollars per month is added to this sum to pay house rent, provided the superintendent makes the State capital his home. No other State in the Union, save one comparatively poor Southern State, pays such a beggarly salary. The office can not expect to attract really strong men until it pays a salary commensurate with the importance and dignity of the office. Certainly, the State superintendent should be remunerated at least as well as the heads of the State's higher educational institutions and the leading city superintendents, which is now far from being the case.

Again, the constitution and laws are silent on the matter of the superintendent's educational qualifications. Every teacher in the service and every supervising official in city and county must have certain legally prescribed qualifications. It is assumed, of course, that the State superintendent will be a well-prepared educator; but this has not always been so.

Other States and permanent professional superintendencies.—In 16 States the head of the State school system is appointive. In most of these States there are no limitations in regard to previous residence of the superintendents, who are appointed solely for their professional worth from the country at large. This practice has long been followed in the important city superintendencies in the State, and should, likewise, be followed in filling the more important office of State superintendent.

Two different plans are pursued in selecting the heads of State educational systems. The governor may appoint them, or they may be appointed by State boards of education. Of these two methods the latter is the more satisfactory. Where the selection is left to the governor there is at least the old danger of continuing the office in politics. On the other hand, if chosen by a nonpolitical State board of education, these difficulties would be overcome (see page 23). The first appointment might be probational, for a term sufficiently long to demonstrate the official's fitness for the place. Reappointment should be for an indefinite term, the State board retaining the right to remove the incumbent from office for misfeasance or malfeasance. Under such a permanent organization the State superintendent could raise the State school system to a high point of administrative efficiency.

It is further suggestive that the States which have organized their State departments of education on a professional basis pay better salaries than the elective States do. The following are a few of the States which place a premium on scholarship, experience, and general fitness by appointing their superintendents, and the salaries paid: New York, $10,000; New Jersey, $10,000; Massachusetts, $6,500; Vermont, $5,000; Rhode Island, $5,000; Pennsylvania, $5,000; Minnesota, $4,500; and Ohio, $4,000.

Organization of the State department of public instruction.—The law charges the State superintendent with supervision of the State's elementary and secondary schools. He has great supervisory and inspectorial duties. The county schools and county superintendents are nominally under his direction; the same is true of city and town schools and their superintendents, and other independent school districts. He examines all persons who desire to teach in the public schools, and validates certificates issued by other States; he gives instruction and advice to institute directors, and helps manage the State reading circle. He is president of the State free library commission, and ex officio president of the new State board of education. He prepares and presents a biennial report to the governor; he has a voluminous correspondence covering interpretation of school law, appeals by teachers, school boards, and superintendents. So many and so varied are these duties and responsibilities that unless the superintendent has a large well organized "inside" and "outside" staff, there can be little time or energy left in which to plan and push progressive school legislation. It is well for the State to realize that it avails little to charge the superintendent of public instruction with supervisory, inspectorial, judicial, administrative, and similar duties, unless he is provided with an adequate force of helpers who can form the necessary trained organization through which to exercise the will of the State.

Now what are the facts in regard to the organization of the State superintendent's office in South Dakota? The total office force at the present time consists of a deputy State superintendent, two clerks, and one stenographer. The cost of maintaining this office during the biennium 1914–1916 was as follows:

Item.	1915	1916
State superintendent's salary	[1] $1,800	[1] $1,800
Salary of deputy and stenographer	2,440	2,440
Two clerks	2,400	2,400
Office expense, supplies, and incidentals	4,715	4,799
Traveling expense of superintendent and deputy	522	801
Total	11,877	12,240

The State superintendent receives, in addition to this, $50 per month for house rent.

The State maintains no specialized educational staff to carry out the requirements of the law. The State superintendent and his deputy spend as much time as they can spare in field work. But no real forward-looking educational policies can be realized under these conditions. While they are devoting their energies to field work, office tasks accumulate, requiring overtime and long hours to clear up the accumulations. The department has no State high-school inspector (the deputy superintendent gives what time he can spare to this office); it has no elementary school inspector; and no supervisor for consolidated and other rural schools. This department organization is wholly inadequate for a State of South Dakota's size and wealth. It is probably true that for its size and population South Dakota has a smaller staff in its superintendent's office than has any other State in the Union.

A larger conception of the State department of public instruction.—The public conception of the functions of the old State superintendency has undergone marked changes in recent years. The public is beginning to realize that this office—under whatever name it may have—must be de facto head of the entire State system of schools, not alone the elementary and secondary schools, but as well of all higher educational institutions and specialized phases of education. The State has unquestionably suffered great educational loss because its State department of public instruction has been limited by reason of poor financial support in the main to the mechanical side of school administration. In justice to the present superintendent and his staff it should be said, however, that the work is efficiently done, so far as it can be done at all with the present small staff. But no important constructive educational policy has yet been initiated, including the various educational agencies in the State. Under prevailing laws and with the present meager legislative appropriations little can be done toward centralizing the professional leadership in the State superintendent's office. In fact, a comprehensive reorganization of the department is highly desirable, to make it part of the proposed system of State-wide school administration outlined in Chapter V.

The State board of regents of education is organized under a constitutional provision (art. 14, par. 3), which reads:

> The State university, the agricultural college, the normal schools and all other educational institutions that may be sustained either wholly or in part by the State shall be under control of a board of five members appointed by the governor and affirmed by the senate under such rules and restrictions as the legislature shall provide.

The political code makes specific provision for the selection, term of office, continuation in office, powers, duties, etc., of the board of regents. Their term of office is six years; vacancies are filled by the governor. They must be persons of "probity and wisdom and selected from among the best-known citizens, residents of the different portions of the State, none of whom shall reside in the counties in which any of the State educational institutions are located." The traditions of the board of regents are enviable, as exceptionally strong men have invariably held this important trust. The portion of the section placing limitations on the place of residence of members is a wise provision, as it removes the possibility of local pressure and other ulterior influence.

The board of regents elect a president from among their own members, and a paid secretary and stenographer who shall not be chosen from among the members. They hold two regular meetings annually and as many special meetings as they may deem necessary. The regents are each paid an annual salary of $1,000.

The functions, powers, and duties of the regents are many. They have full control of the affairs of the university, the college of agriculture, the school of mines, and the four normal schools. They are a board of laymen comprising the best business ability of the State, well fitted to give the higher educational institutions a good business administration. On the other hand, many of their prescribed functions are purely professional, requiring the interpretation of the educational expert. This means that many important tasks of a professional nature must at the present be left for final determination with the presidents and faculties of the said institutions. This is in a measure wise. But a better plan would probably be to make the professional State superintendent an ex-officio member of the board of regents (see p. 25), to represent the professional policies of the regents before the presidents and faculties, at the same time that he represents the interests of the public schools of the State in these higher institutions. At the risk of repetition it may be stated here that no real educational link, at the present time, binds intimately the head of the State's public schools and the heads of the State's higher educational institutions. This has led to considerable embarrassment and some misunderstanding, and much loss of efficiency. How this may be remedied is explained in the next chapter.

The State board of charities and corrections is a purely lay board. At present it is composed of business and professional men of good ability, but without the special qualifications required to administer successfully important educational institutions. This board has complete management of the State penitentiary, the two asylums for the insane, the training school for boys and girls, the school for the deaf, and the school for the blind. The board of charities is appointed and organized on the same plan as is the board of regents. The members each receive an annual compensation of $1,500 and necessary expenses. But in functions and duties this board differs materially from the former. The regents administer a group of purely educational institutions. The board of charities have control of two schools that are wholly educational—the schools for the deaf and the blind; of one which is both educational and corrective—the training school for boys and girls; of two which may be classed as charitable; and of one which is penal and corrective.

The State board of charities and corrections should be continued as at present, but the three above-mentioned educational institutions should be placed under the jurisdiction of a board organized to care for educational institutions to make the schools more effective than now. (See p. 24.) Details of this proposed reorganization are explained in the next chapter.

Chapter V.

IMPROVEMENT IN STATE SCHOOL ADMINISTRATION.

The last few years have brought about a great change in the place and importance of public school education in the United States. This enlarged conception of education has added new importance to the chief educational office in the State—the State department of public instruction. The office as originally created in the older States was chiefly clerical and statistical, much akin to the now passing ideas of the functions of a middle-western county superintendency. Almost any person chosen from the general electorate could fill the place to the satisfaction of the public.

But the demands of to-day require a new type of educational leadership, able to master the manifold problems of modern school organization and administration, general instruction, school sanitation, industrial and vocational education, interrelation of the public and higher schools and educational legislation.

The State in new educational leadership.—The great problem in South Dakota is how best to manage the State's growing educational business: how best to create an educational organization strong enough to do the work efficiently and economically, and in a large, constructive way. The present State department of public instruction was organized when the more limited conception of school eduacation prevailed. The great problem now confronting the State is how best to reorganize its educational administration, how to centralize it for greater effectiveness in capable hands, without taking away from the smaller educational units their local initiative and administrative efficiency.

The survey committee is convinced that the needed reorganization can best be brought about by enlarging the powers of the present State board of regents of education and give it central control of the educational affairs in the State. The enlarged board should retain all its present powers and duties, and in addition thereto have general oversight of the public elementary and secondary schools, the schools for the deaf and the blind, and the training school for boys and girls, and, finally, to absorb the functions of the State board of education created to meet the requirements of the Smith-Hughes Act. The State board of charities could continue as a State board to administer the State asylums for the insane and the State penitentiary.

Enlarged State board of regents of education.—The enlarged board should be primarily a lay board, representing the larger educational policies of the public, delegating the professional side of education and the administration of their general policies to their appointive executive officials, the State superintendent of public instruction, and the presidents of the higher educational institutions. The board should be composed of eight members to be appointed by the governor, by and with the consent of the senate, the term of office to be eight years, not more than two members to retire each biennium, thus perpetuating the board's continuance and making it permanent. Vacancies should be filled by the governor as at present. The same care should be exercised in selecting the members as in the case of the present board of regents. The appointment should be for absolute worth and regardless of residence—provided that no regent be chosen from the county in which a higher institution of learning is situated—occupation, party affiliation, religion, or sex. The members should serve without remuneration, except actual traveling and other necessary expenses.

The general powers and duties of the enlarged State board of regents of education should be:

(1) To retain and continue the powers and duties now held under law for the administration of the State university, the State college, the school of mines and the State normal schools.

(2) To have general oversight and control of the public-school system of the State.

(3) To select a State superintendent of public instruction, to be the executive official of the board.

(4) To require uniform records and reports, in form to be prescribed by the superintendent of public instruction, from all educational institutions supported by the State, and from all other organizations doing educational work receiving State accreditment and recognition.

(5) To classify and standardize, under the direction of the State superintendent, the public schools of the State.

(6) To prescribe the standards and courses of study for the State normal schools, the educational departments of the denominational colleges and academies accredited under State law, and such other teacher-training institutions as may be established by law.

(7) To adopt rules and regulations for the sanitary inspection of schools and for the physical examination of school children; and, in conjunction with other State authorities, to see that the rules relat-

ing to school health, compulsory education, and child conservation be enforced.

(8) To have general control of the schools for the deaf and the blind and the industrial school for boys and girls.

(9) To act as a board of control for the State library and the State historical collections.

(10) To transmit to the governor and the State legislature a biennial report covering all the activities of the university, the State colleges, and of the State department of public instruction in its relation to all public elementary and secondary schools and the above-mentioned higher educational institutions of the State.

(11) To perform such other duties and functions as are prescribed by law.

The State superintendent of public instruction.—Under this proposed reorganization the superintendent of public instruction would become the executive official of the State board of education to carry out in detail the educational policies of this board. He should be appointed by the State board for professional ability and successful educational experience, regardless of residence or party affiliation. After a probational service to prove his ability, he should be reappointed for an indefinite term of years. His salary should be commensurate with the importance of the office and in keeping with what is being paid for this service by the most progressive States in which this official is appointive.

(1) The State superintendent of public instruction should be the executive official of the State board of regents of education and executive head of the State department of education, and should enforce all the rules and regulations made in conformity to law by the State board for the public elementary and secondary schools.

(2) He should have supervision of all the different divisions of the State department of education and should be held responsible by the State board for the proper administration of the duties of each such subdivision.

(3) He should, in cooperation with the heads of the State's teacher training institutions and in conformity with law, prescribe courses of study for these training schools, methods and standards for the certification of teachers and validation of teaching credentials from other states.

(4) He should personally direct all educational activities wherein the State department of education, under law, cooperates with the presidents and faculties of the higher educational institutions of the State.

(5) He should have such other powers as under law belong to the office of superintendent of public instruction.

The State department of education.—As may be seen from the following illustration (Figure 3), the reorganized State department of education is comprehensively planned on lines of approved business principles. The most important business in South Dakota is education. Its State school administration should no longer be obliged to continue the present haphazard, cheap way. If the State is to get full returns on its great educational investment, the methods, ways, and means utilized must be of the most approved known to experts in school administration.

The proposed department outlined above is organized into administrative divisions, each in charge of an expert in his particular educational field. It is proposed that all such divisions be organized at once, although several may be combined under one head until additional staff officers are required by the increased volume of work.

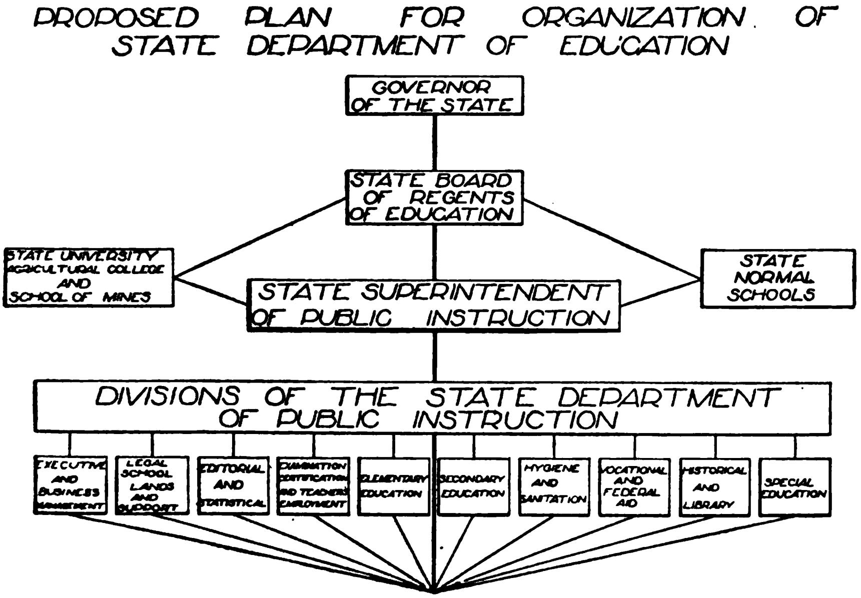
PROPOSED PLAN FOR ORGANIZATION OF STATE DEPARTMENT OF EDUCATION
GOVERNOR OF THE STATE
STATE BOARD OF REGENTS OF EDUCATION
STATE UNIVERSITY AGRICULTURAL COLLEGE AND SCHOOL OF MINES
STATE NORMAL SCHOOLS
STATE SUPERINTENDENT OF PUBLIC INSTRUCTION
DIVISIONS OF THE STATE DEPARTMENT OF PUBLIC INSTRUCTION
EXECUTIVE AND BUSINESS MANAGEMENT
LEGAL SCHOOL LANDS AND SUPPORT
EDITORIAL AND STATISTICAL
EXAMINATION CERTIFICATION AND TEACHERS' EMPLOYMENT
ELEMENTARY EDUCATION
SECONDARY EDUCATION
HYGIENE AND SANITATION
VOCATIONAL AND FEDERAL AID
HISTORICAL AND LIBRARY
SPECIAL EDUCATION

FIG. 3.

The executive division should have charge of the business management of the department and keep all the books and records of the State board of regents of education. The head of this division could act as secretary for the State board of regents of education. He might also apportion the State school funds, under the direction of the State superintendent.

The legal school lands and maintenance division might, for the present, remain in personal charge of the superintendent of public instruction. This division should edit and annotate the school code—an important task at the present left to publishing houses throughout the State. The superintendent has the power under law to interpret the school code and decide matters of controversy arising under it.

The elementary education division should have charge of educational measures in open country districts and in places of less than 1,000 population. It should study the means for improvement of the schools aforesaid and through field propaganda and in other ways be of assistance to school patrons; it should especially devote its energies to school consolidation, to introduction of agricultural instruction, home economics, manual training, etc.

The secondary school division should classify and accredit the high schools of the State, and inspect them from time to time to see that they comply with State requirements.

The vocational education division would do the work of the State board of education which was recently organized to accept the benefits of the Smith-Hughes Vocational Education Act.

The hygiene and sanitation division should be intrusted with the enforcement of legislation on school hygiene and sanitation. It would have charge of the health inspection of school children, and prepare and sanction plans and specifications of all public-school buildings to be constructed in the State.

The historical and library division should be directed by the present State historian and should include the present State historical collections and State museum and the State library.

The special education division should be intrusted with all correctional education, with instruction of the deaf and blind, and of subnormal children, which work would be done under the immediate direction of the superintendent of public instruction.

Steps in the reorganization.—To the end of consummating the reorganization proposed in this chapter and other changes outlined in later chapters the survey committee recommends:

(1) A constitutional amendment to enlarge the powers and duties of the State board of regents of education.

(2) A constitutional amendment providing that the legislature determine the method of selecting the State superintendent of public instruction and county superintendents of schools, and fixing their qualifications, compensation, tenure, salaries, and powers and duties.

(3) A constitutional amendment to place the State Training School, the State School for the Deaf, and the State School for the Blind under the control of the State board of regents of education.

Chapter VI.

LOCAL SCHOOL ORGANIZATION AND ADMINISTRATION.

Present tendency in school district organization.—The State is subdivided for local administration of education into school districts which, in organized counties, vary in size from a few square miles supporting a single school to several townships supporting many schools. In this particular the school organization of South Dakota is quite unique, as in most other States only a single type of school district organization prevails.

The code under which public school districts are organized provides (Art. III, Sec. 68) that "townships shall be made the boundary lines of the districts." Again, that the county commissioners "may, at their discretion, when for the best interests of the schools, organize one or more congressional townships into one school district." Provision is also, unfortunately, made for further divisions of these one or more township districts into smaller districts at the pleasure of the patrons concerned. (Art. III, Sec. 69.) At the present time the tendency is toward smaller and smaller units of organization for local support and school administration.

A study of South Dakota's educational map shows that the one unorganized county, Todd, forms (Art. III, Sec. 68) a single county-wide school district; that many of the newer, sparsely-peopled counties west of the Missouri River are divided into school districts containing one to five or even more congressional townships. East of the river some counties have retained the township district intact; others have a mixture of township and single school districts; while still others contain only the small local districts.

History of school district organization.—It is important to determine the effect of this gradual disintegration of the large school districts into smaller and smaller areas on the economy and efficiency of the schools. Are these small districts suitable units of administration for a great agricultural State seeking in its schools effective preparation for agricultural life? Are they conducive to the organization of larger, effective schools of elementary and secondary type? Or do they tend to perpetuate the pioneer system of three R's schools? The queries can best be answered after making a brief statement of the evolution of school district organization elsewhere.

The local schoolhouse district originated in New England in the early days of English colonization, whence it spread westward wherever the settlers penetrated the wilderness. It was purely a community enterprise, each group of families organizing and supporting its own school as best it could. The district organization usually preceded school legislation, which later sanctioned it as the only practicable organization for the settlement.

Throughout the United States people have begun to realize that the small district has about outlived its period of usefulness, and that it ought to be supplanted by a more effective unit of organization. In New England the more compact township organization has already driven out these local districts. The same is true in Pennsylvania, Indiana, and other States in the Middle West. The Southern States generally are organized under the county unit, with one board of trustees for all the schools in a single county. Eighteen States have already adopted the county unit in one form or another, and 13 are using township organization in whole or in part. In all the rest there is a strong movement under way to supplant the pioneer district with one or the other of township or county organization, with the latter generally in the ascendency.

The chief reason for discontent with the local district is that it has become an almost insurmountable obstacle to the type of school organization required by a modern rural population. As a tax area it causes untold injustice and inequality. School consolidation and the maintenance of rural high schools have proved exceedingly difficult where local boards and district lines have to be considered. Finally, local jealousy and closefistedness and individual indifference have often resulted in short terms and underpaid teachers, a meager course of study with the usual results—non-enrollment of a large proportion of the school population, irregularity of attendance, and early dropping out of school.

Local administrative units.—This State has not in every respect followed the natural trend of local administration outlined above—i. e., beginning with the small district and later turning from it to something more practicable for an up-to-date agricultural commonwealth. The first territorial superintendent of schools, Gen. W. H. H. Beadle, himself reared under the township system in Indiana, anticipated the organization of small districts by having the present township system included in the code. However, the great mistake made in this State was to give the township unit the same kind of school administration as in the one-school district. In this respect the South Dakota township district differs from that of Indiana, which may explain the doubtful success of the unit in South Dakota.

The evolution in local administration in the State, as it appears to the casual student, may finally be summarized thus: The large unorganized county forms a single county district under control of the governor. In the organized counties the settled portions are divided by the county commissioners into township districts of one or more congressional townships. In the older settled counties these large township units are disintegrating into small one-school districts (1) because of immoderate desire to have the school as near one's own home as possible, or (2) because the administration of the larger districts has occasionally proved unsatisfactory in practice. A reaction is beginning to set in against the small districts; but usually this does not take place until after the community has suffered from all the inherent weaknesses that belong to the small, helpless district. Consolidation of small districts is finally being resorted to as the ultimate solution of a very difficult problem.

The township district is managed by a school board of three members, who have complete control of all the schools within the district. If the district happens to contain three or four schoolhouses, educational advantages are usually fairly equalized among them; but if they have more than three schools, some of these are likely to be neglected. The explanation is not far to seek: the three board members are usually distributed over the district so that each member lives near his own school. In the board meeting he is inclined to use his influence to the end that this school gets "what is coming to it," to the serious loss of the unrepresented schools. Because of this the unrepresented portions of the large districts are prone to start a movement to organize small districts of their own. This statement is not meant as a condemnation of all township districts, as the committee found many well-administered township districts. The township organization is assuredly preferable to the local district; but neither seems adequate to present needs.

The study of the prevailing school districts has disclosed that:

1. *Small school boards are ineffective and impracticable.*—South Dakota has approximately 4,500 school districts, each in charge of three local trustees. This makes a small army of about 13,500 men. A well-settled county has from 50 to 300 or more trustees. Such an organization is inexcusable. It is unreasonable to expect that half a hundred men can be found in an ordinary county suited by temperament and training to fill all these positions. Even if the men could be found, there is neither business reason nor educational reason for bringing such a large force into the management of the schools.

2. *Board members often misdirect their efforts.*—Many board members give their time freely to the schools, and in some instances to good purpose. But, generally, their efforts spent are misdirected because they lack knowledge of educational needs.

3. *Inequality of school support.*—Wealthy districts are sometimes controlled by men whose chief aim is to keep taxes down. In neigh-

boring districts, with smaller aggregate wealth, it may happen that the school plant is modern and satisfactory because the men there tax the community to the limit.

On general principles the whole wealth of the State should be made available for educating all the youth of the State. This is both right and just, for education is a State function, to be supported like other similar functions. While it is the conviction of the survey committee that the State should levy a State tax for school purposes (see p. 55), the same principle should be applied to the county. The school district has proved too small to be intrusted with final legislation in such matters as taxation. Taxation for general educational purposes should be vested in the larger natural unit of civil administration—the county.

4. *Selection of teachers.*—Teachers are chosen by the local boards, who do much as they please in these matters. Some counties which have superintendents of exceptional personality allow these educators a free hand in placing teachers, but this condition is unfortunately exceptional. The prevailing practice of selecting teachers by local boards has led to serious abuses that need not be mentioned here. Suffice it to reassert that the average school board in rural districts is unable to choose teachers wisely. This duty should be vested in some educational authority in closer touch with the teachers and with the schools that are training the teachers.

5. *Small districts are unable to meet modern community needs.*—The small one-teacher district does not have within its boundaries what is necessary to make a modern community school (see p. 71). The district school in South Dakota devotes its energies to the tool subjects almost wholly. Few pupils complete the prescribed course of study. The schools are not organized to attract and hold the larger boys and girls, and most of the schools are unable to provide the social aspects required of modern education. The small one-teacher district is unquestionably responsible for the following fundamental weaknesses from which all are suffering: Nonattendance of a large per cent of the school population; irregularity of attendance; and great wastage in attendance due to lack of interest in prescribed school work.

Proposed plan of school district reorganization.—The survey committee recommends the following reorganization of existing common school districts in the State:

1. Legal disestablishment of all common school districts as now organized in all counties with a school population of more than 2,000 children of school age outside of present independent districts,[1] and the establishment in lieu thereof of the county as a single school dis-

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[1] Or in lieu thereof a certain number of persons of school age per square mile in the county to be determined by law.

trict; permissive disestablishment of similar districts in all other counties, and their reestablishment as single county districts.

2. Election of a county board of education for each county in the State to supplant the present district boards in all counties organized on the county-district plan and to have such powers and duties in all other counties as are set forth in Chapter VII.

The recommendations explained.—The first recommendation provides for an effective plan of school organization. The "county unit organization," by which name it is commonly known, has proved the most satisfactory of all forms of organization, wherever it has been properly safeguarded. In one or two States it is not satisfactory, because under it the people have been deprived of all the rights they formerly had. This is not true of the plan proposed for South Dakota in the present and the following chapter.

1. Under the proposed plan the members of the county board are elected by the people from among the leading men and women of the county. This allows the people to retain the reins of government in a large way.

2. In all counties reorganized under the county-unit plan each school community will be represented before the county board by one subdirector. (See Chapter VII.) This is really more than is true of some schools under the present system, as the schools in township districts of more than three schools are often grossly neglected if a board member does not live near such school. This is of course not invariably true, but altogether too often.

3. Under the county plan the county will become the unit of taxation, which is eminently fair; but this is not done to the exclusion of local tax rights. For extraordinary purposes the school community retains the right to levy taxes and issue bonds. (See Chapter IX.)

4. The most vital phase of the whole problem is just where to draw the line between counties to be classed under "compulsory" and "permissive" county unit. This form of government operates most satisfactorily in well-settled counties. Judged by the experience elsewhere 2,000 children of school age should be the minimum measure for a congressional county of 16 townships, or about three and one-half persons per square mile. A basis of not less than *three and one-half persons of school age per square mile* would probably prove more satisfactory than the flat minimum of 2,000 persons of school age, as the latter would exclude some of the small but well-populated counties, and include several of the large but sparsely settled counties.

Chapter VII.

COUNTY ADMINISTRATION AND SUPERVISION.

For the greatest administrative efficiency in education the unit of administration should conform geographically to the unit used for civil administration. In South Dakota the county is the civil administrative unit; it is also the legal unit for supervision of schools. But the legal school districts administer all matters of vital importance in public-school education. While local school administration is, in theory at least, the most democratic, it has proved in practice both wasteful and inefficient.

The present chapter deals with two important factors in county school organization: (1) The present county superintendency; and (2) a more practicable county system of administration and supervision.

X *The South Dakota county superintendency.*—In this State county superintendents have charge of the professional management of all schools in villages of less than 1,000 population and in the open-country districts. This means that county superintendents are charged with the supervision of 5,205 schools in a total of 5,492, and 88,842 pupils enrolled in a total of 134,136 pupils. The office is elective and political. The term of office is two years, and no superintendent may hold office for more than two consecutive terms. To be eligible for the office, the candidate must be "the holder of a regular first-grade certificate or a certificate of higher grade valid in the State." The minimum salary prescribed by law is $900 per annum and the maximum $2,000. An amount not to exceed $400 per annum is allowed for necessary traveling expenses.

The law provides that the board of county commissioners may, when in their judgment it shall be necessary, authorize the county superintendents of counties having more than 75 schools to appoint deputy superintendents during such time and at such salary or compensation as said board of commissioners may determine. This means, in practice, that a deputy superintendent may or may not be appointed, according as the county commissioners are or are not interested in educational matters.

The powers and duties conferred on the county superintendent do not make this official the leader he should be in county educational matters. He is by law "charged with the general supervision of the schools of his county. In towns having less than 1,000 inhabitants he shall have authority to direct supervision." The superintendent's specific duties are to visit each school in his county as frequently as possible; to supervise the teaching process; to inspect grounds, buildings, etc.; to keep a complete record of his acts, and a register of all the teachers employed; to make annual and special reports to the State superintendent; to encourage and hold annual teachers' institutes and occasional teachers' associations; to encourage higher standards of teaching and employment of better teachers; to encourage reading circles; and to conduct annual contests in agriculture, industrial arts, and home economics.

Who the South Dakota county superintendents are.—Members of the survey committee met the county superintendents in groups at called meetings or saw them as individuals at work in their counties. There are many strong, well-prepared men and women among them, but also some who could never obtain the office of a county superintendent were it not for the ups and downs of party politics.

The following data are gleaned from questionnaires answered by each of the county superintendents in the State, a detailed tabulation of which appears in the appendix of this bulletin.

1. *Tenure.*—There are 64 superintendents, of whom 36 are women. Thirty superintendents have held office one year only, and one superintendent alone is in her ninth year (having begun a third term, though the terms have not been successive). In other words, there is absolutely no permanency in this important office. The State law makes the office a political plum to be passed around with the rest of the lay offices of the county, when in fact it is a professional office of the highest importance, to be held for an indefinite tenure by professional educators only.

2. *Age.*—The average age of the present incumbents is 38.68 years for men and 35.54 years for women; the median ages are respectively 37 and 33 years.

3. *Salaries.*—The amount paid for county superintendents' salaries during the past year was $87,565.08. The travel allowance varied from $85 to the legal maximum of $400 per annum. Forty-three of the county superintendents reported the maximum allowance. The average annual salary of the county superintendents was $1,368.23, the average total expense for the office, $2,400.05. The total expenditure for maintenance of the office, including salaries for deputies and clerks, was $153,603.22. Four counties, Brown, Day, Pennington, and Perkins, have deputies with salaries placed respectively at $1,020, $780, $1,000, and $850. Thirty-seven counties reported clerical help, 25 being for full time and 12 for part time. The salaries paid these helpers varied from $3 per day to $900 per annum.

4. *Education.*—Fifty-two superintendents reported high-school attendance—28 having completed four-year courses; 11 have had three years' work in high school; 13, two years or less; while 12 have had no high-school education at all.

Forty-eight superintendents have had additional preparation—25 in university or college, and 23 in normal schools. Twelve hold degrees from college or university; of these, 4 have the degree of A. B.; 3 the degree of B. S.; 2, M. A.; 1, Ph. G.; 1 B. L.; and 1 M. E. Of the 23 who have had professional preparation, 8 have had three years or more; 12, two years or more; and 3, less than two years.

Twelve superintendents have had high-school courses only; 7 have attended high school and college; 14, high school and normal school; 5, high school and university; 7, college and normal school; and 3, high school, college, and university.

5. *Time devoted to classroom supervision.*—Eight superintendents reported devoting one-half of their time to classroom supervision; 8 gave one-third of their time; 11, one-fourth; 21, one-sixth; 12, one-tenth; and the rest none. Sixteen of the 64 reported just enough time to classroom practice to meet the requirements of the law.

It appears from the above that the office tenure is too short to make possible the initiation and prosecution of concerted, well-organized policies to upbuild the schools. No sooner has a superintendent got big plans under way than he must yield to a successor, who, likely as not, is pledged to some other policy. To remove the office from party politics and make its tenure indefinite is the only sure way to make the superintendent the chief educational official of the county as he should be.

The salaries are insufficient to attract well-prepared, experienced men and women to the office. Many superintendents receive only the minimum of $900. At all times, but particularly in these war times, such an allowance is scarcely enough to hold body and soul together, to say nothing about using a part of the income for professional improvement.

The academic and professional qualifications required to qualify for the office are too low. Only educators of long successful experience, holding college or university degrees, or advanced-course normal-school diplomas and State certificates or life diplomas should be eligible.

The superintendent should finally have an adequate working staff to aid him in giving the county an efficient system of administration and supervision such as the law assumes that he gives.

Increasing importance of the county superintendency.—The first county superintendencies in the United States were organized to administer and apportion the school funds, to keep records of school population and attendance, to enforce the school laws, and in other ways carry out the will of the people. These duties did not require any particular qualities or training; therefore, the positions could be filled in the same way as other civil offices in the county, through seasonal election by the general electorate.

The rapid changes in rural life have thrust new responsibilities on the county superintendent as well as on his teachers. He still retains the clerical and financial duties given the office at the time of its founding. The instructional work in the schools has grown vastly in scope and importance and should receive much of his time. The improvement of teaching staffs by means of reading-circle work, institutes, and teachers' associations is another new task falling to him. He should, finally, be a rural and agricultural expert who can inspire, guide, and assist in organization for rural leadership.

Such a multiplicity of school work is quite beyond the abilities of a person chosen merely for clerical aptness from the general electorate. It demands, in a word, a good organizer, a person of exceptional business ability, a professional supervisor with good ability to assist his teachers, a person of unlimited energy and the courage of his convictions.

A proposed county system of education.—The important position of chief county educational officer in South Dakota can, in the conviction of the survey committee, best attain its highest efficiency and most effectively influence school education through a complete reorganization of the whole system of county schools. This can be done effectively and economically without in any way interfering with genuine democracy in education.

The survey committee, to this end, recommends:

1. The organization of a county board of education to have the management of the educational affairs of each county.
2. The election, by the county board of education, of a professional county superintendent to be the chief educational official of the county and executive officer of the board.

The county board of education.—This board should in organization and functions be a prototype of the State board of regents of education. It should be composed of five citizens selected from the county at large, known for their ability and probity, elected for a five-year term from at large over the county, one member to retire each year. Vacancies on the board should be filled by the county board of commissioners for the unexpired term. The board should receive all necessary traveling expenses and a reasonable per diem to compensate them for their time. The board should be strictly legislative, leaving the executive duties to the county superintendent.

The chief powers and duties of the county board of education may be summarized as follows:

1. To enforce the laws relating to education, and the rules and regulations of the State board of regents of education, within their respective counties.

2. To elect the county superintendent, and appoint a deputy superintendent and all necessary supervisors and office assistants; also to elect one subdirector for each school community within their jurisdiction, provided the county is organized on the county unit plan.

PROPOSED PLAN FOR ORGANIZATION OF COUNTY SYSTEM OF EDUCATION

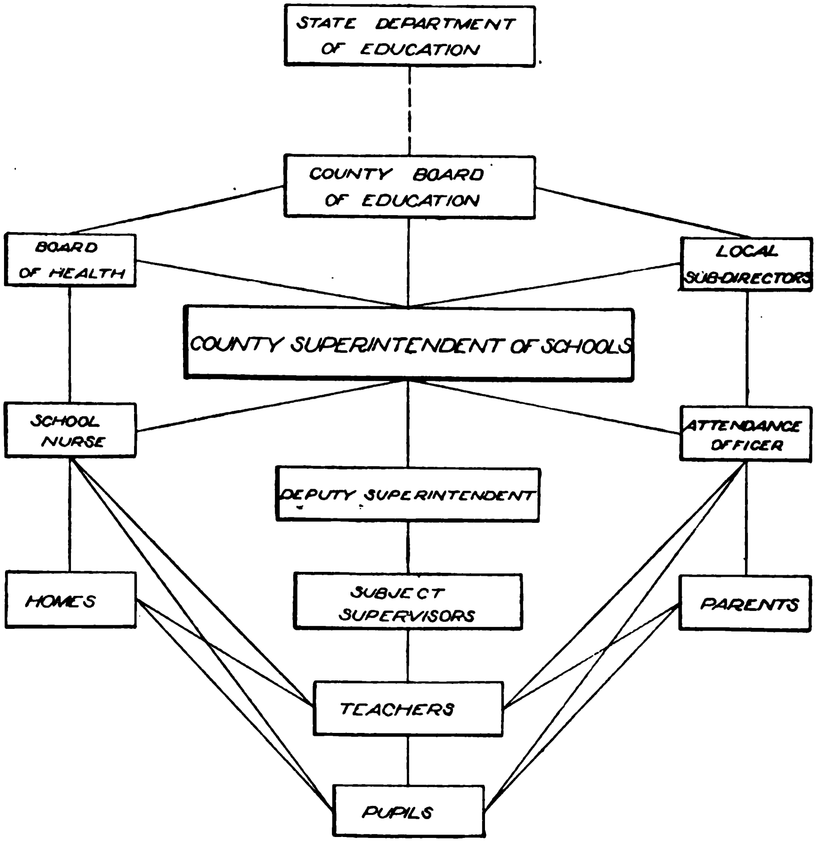

FIG. 4.

3. To have direct charge of all county schools in counties of more than 2,000 children of school age, and in such other counties as may take advantage of the county unit act, including the closing of unnecessary schools, building new schools, consolidating schools and conveying children to school, and organizing rural high schools.[1]

4. To elect all teachers needed in the county schools on nomination by the county superintendent.

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[1] See note on page 30.

5. To levy a uniform school tax on all the taxable property of the county, under legal limitations; and to expend the funds thus procured to equalize educational advantages among all the school children of the county.

6. To exercise all other powers and duties not enumerated above, but which are prescribed by law.

The county superintendent of schools.—In electing its chief executive official, the county superintendent, the county board of education should not be restricted to the county or even the State. The best candidate from anywhere in the country is none too good. Neither should the board be restricted by a candidate's religion, party affiliation, or sex. The term of office should at first be probationary, though never less than four years. Thereafter it should become permanent. The salary should be not less than $2,500 per annum in all county unit counties, and not less than $1,500 in counties not so organized.

The chief powers and duties of the county superintendent of schools should be—

1. To act as executive officer of the county board of education, and to execute, under their direction, the educational policies determined upon by the board.

2. To act as chief educational official of the county, in which capacity he should represent the county board of education.

3. To see that the compulsory attendance act is enforced and the child welfare laws obeyed.

4. To nominate, for appointment by the county board of education, one deputy superintendent or professional supervisor for each fifty schools within his jurisdiction.

5. To supervise the classroom practice of all county schools, either in person or through his assistants.

6. To carry out all policies of the county board, and have charge, under direction of the board, of all schools, including continuation school activities, night schools, part-time schools, short courses, etc., undertaken for promotion of vocational and other education within the county.

7. To have charge of health education in the county, including health inspection done in conjunction with the county board of health, and to direct the work of the county nurse, if such a one is appointed.

8. To keep full records of all educational activities in his county, and to make reports from time to time to the county board of education, and to the State superintendent of public instruction.

9. To examine candidates for special teachers' certificates.

10. To perform such other duties as by law belong to the office.

Chapter VIII.

SCHOOL POPULATION, ENROLLMENT, AND ATTENDANCE.

The best evidence by which to judge the effectiveness of a school system is the extent to which it is utilized by the people of the community or State. If a school system is well organized and firmly administered, a large per cent of the school population will be enrolled in the schools. If the teachers in charge understand their tasks well, treat the children as they should be treated, and teach subject matter well adapted to the needs of the children, a large per cent of the enrollment will be regular in attendance. If, on the other hand, the people neglect to make full use of the schools, or the children lack interest in their studies and attend school irregularly, it is fair to assume that the schools are poorly organized and managed, and are not well adapted to community needs.

The present chapter discusses the topics of school population, enrollment, and daily attendance in South Dakota. From the discussion it is easy to decide whether or not the schools meet the reasonable expectations of the people.

The school population.—The schools of South Dakota are legally open to children over 6 and under 21 years of age. The compulsory school age includes all children between 8 and 18 years. A considerable number of children enter school before they are 6 years, though very few continue in the public schools till they are 21. In this State the total range of school population is estimated by the United States Commissioner of Education at 193,417. Several thousand children under 6 years of age are enrolled, although the legal school age is "over 6 years and under 21 years." This group includes 176,867 children and youths. Unfortunately, the department of public instruction does not divide the school population into elementary, secondary and higher school groups. To obtain the required data considerable work was entailed on the survey committee. The elementary school group is 119,194. This group and the other groups given below are based on figures obtained from the county superintendents and are at least fairly accurate. The high school population is 42,655 and the college group, 15,018. Figure 5 shows the range in school population graphically.

The rural school population has made little change in the past five-year period, showing, indeed, a slight decline between 1911 and 1914, due probably to the land rush and later "proving up" on claims and returns to town and homes in other States. Since 1914 there has been a gradual increase in school population. The independent schools have shown a regular increase for the five-year period, being 49,370 in 1911 and 54,325 in 1916. It appears (figs. 6 and 7) that a considerable percentage of this school population makes no use of the schools placed at their disposal by the State. Thus in 1916 only 72.4 per cent of the rural school population and 83.4 per cent of the in-

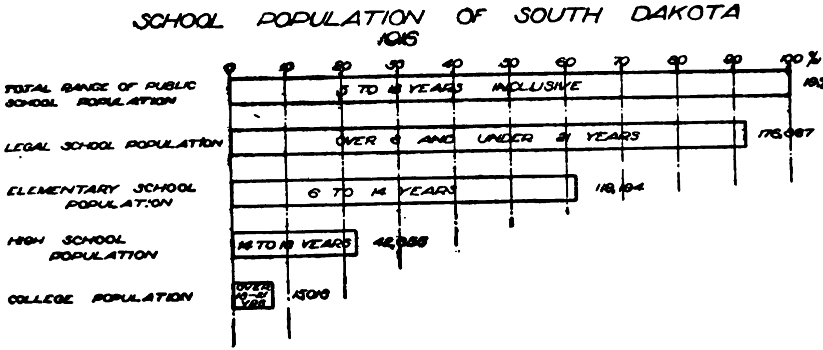

FIG. 5.

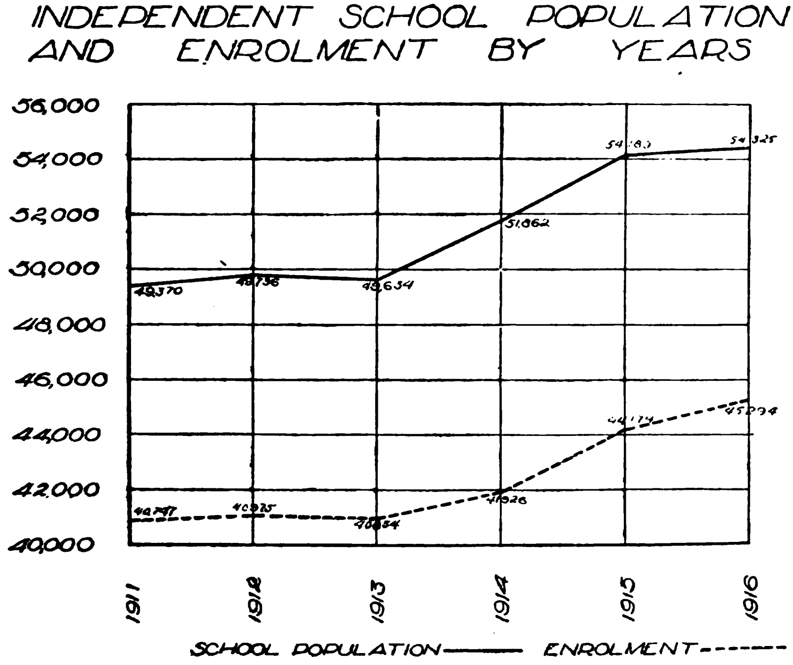

FIG. 6.

dependent school population attended school. If the South Dakota schools were 100 per cent efficient and the people were 100 per cent able and willing to utilize the schools, a somewhat larger per cent of the school population would be enrolled in the schools; although it could not reach 100 per cent, since, as was stated above, a considerable number of these people are already engaged in life activities.

Figured on the basis of the school population between 5 and 18 years of age, the enrollment is even less satisfactory, being 81.04 per cent in 1889–90; 74.49 per cent in 1899–1900; 77.70 per cent in 1909–10; and only 69.35 per cent in 1915–16. This gradual decline in enrollment may be accounted for by a stricter enforcement of the legal entrance age than formerly, although there is no evidence at hand to prove the assertion. But just how does South Dakota compare in school enrollment with other Middle Western and Western States? Table 6 is the answer to this query. The State ranks twentieth in a group of 22 States. It would seem therefore that more of the school population would be enrolled if the schools had the requisite drawing power and if the compulsory attendance laws were enforced without fear or favor.

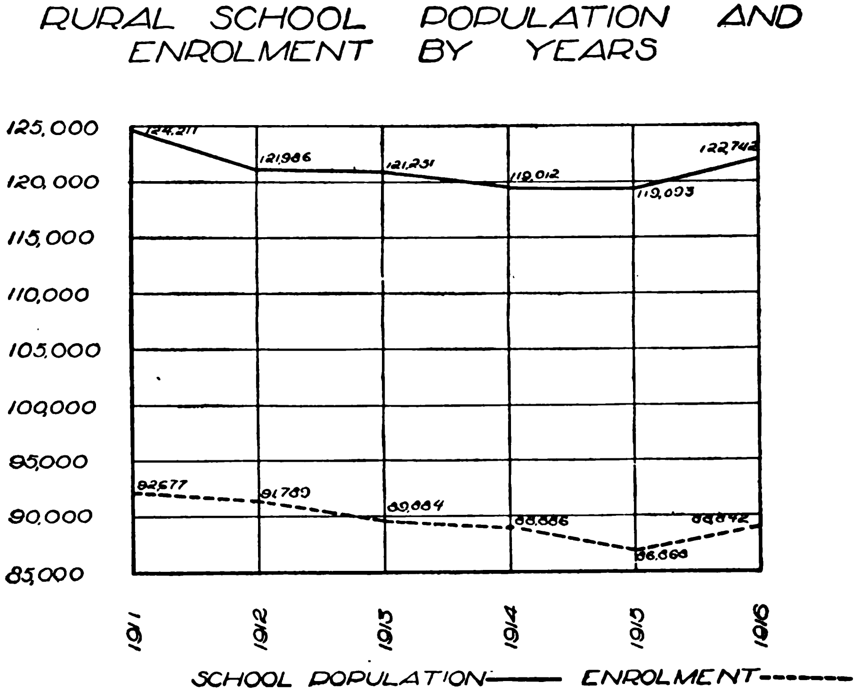

FIG. 7.

TABLE 6.—*Per cent of school population (children between 5 and 18 years) enrolled in the North Central and Western States, 1916.*[1]

1.	California	94.47	12.	Indiana	80.19
2.	Iowa	90.11	13.	Minnesota	78.01
3.	Wyoming	88.04	14.	Oregon	77.61
4.	Utah	85.96	15.	Nevada	76.27
5.	Nebraska	84.84	16.	Ohio	74.34
6.	Idaho	84.68	17.	Washington	73.01
7.	Kansas	83.28	18.	North Dakota	72.90
8.	Michigan	82.62	19.	Illinois	71.64
9.	Colorado	81.94	*20.*	*South Dakota*	*69.35*
10.	Arizona	81.54	21.	Wisconsin	66.75
11.	Missouri	81.08	22.	New Mexico	64.79

Compulsory school attendance.—The compulsory attendance period in this State includes children from 8 to 16 years of age. The compulsory period is longer than in some States, though none too long, as may be seen from the age-grade tables (pp. 45), according to which several thousand children between the ages of 16 and 19 years are still in the elementary grades.

The real question is, Can the attendance law now on the statute books be satisfactorily enforced? In the towns and cities, yes; but in rural districts it is more difficult. The law provides for a paid truant officer for towns and cities, who works under the direction of the city superintendent and local board of education. For the rural schools the county superintendent is ex officio truant officer. Enforcement of the act here depends on the superintendent's initiative and fearlessness. In the first place, it is difficult to discover habitual truancy cases till they are of long standing; in the second place, the votes of these people are cast in the biennial election for or against the county superintendent, which makes the whole a delicate matter to handle. Of the 64 superintendents, 35 reported the law well enforced; 5 reported that it was not enforced in their counties; and 24 declared it was not as well enforced as it might be.

Under the reorganization proposed in Chapter VII these difficulties could be obviated. The superintendent would become responsible for his acts solely to the county board and the State department of public instruction, and he would have clerical assistants to help him administer the county school system on a modern plane. The teachers, also appointed by the county board, could be directed to make monthly reports to the county superintendent, on specially prepared blanks, stating just what number of children and who, coming within the law, are not enrolled. The county superintendent, on behalf of the county board of education and the State department of education, should then begin immediate proceedings under the law.

Daily attendance and school enrollment.—An efficient school system not alone enrolls a large per cent of the children, but it holds all who are physically and mentally fit in daily attendance until they have at least finished the elementary-school course. Inclement weather, long distance to school, bad roads, and, particularly, lagging interest in school work contribute to irregularity of attendance. In an efficient system, such as the county unit can provide, schools are erected where they are needed and nowhere else; the schools are larger, the teachers better—because better paid; and the work is made interesting and attractive enough to sustain, in the children, a desire to be regular in attendance.

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[1] Montana not reported.

That school conditions in South Dakota are far from satisfactory is evidenced by the poor daily attendance on the already small enrollment. In 1910 the average daily attendance in all the schools was only 64 per cent; in 1913 the attendance reached 75.7 per cent; but in 1915–16 it was down to 70 per cent. With the enrollment at 69.35 per cent of the school population, the actual attendance on the basis of school population (1916) would be 48.54 per cent. In other words, less than one-half of the school population actually use the schools of the State, day by day, throughout the short school year. In daily attendance South Dakota again ranks in twentieth place in a group of 23 States, Illinois standing at the head of the list with

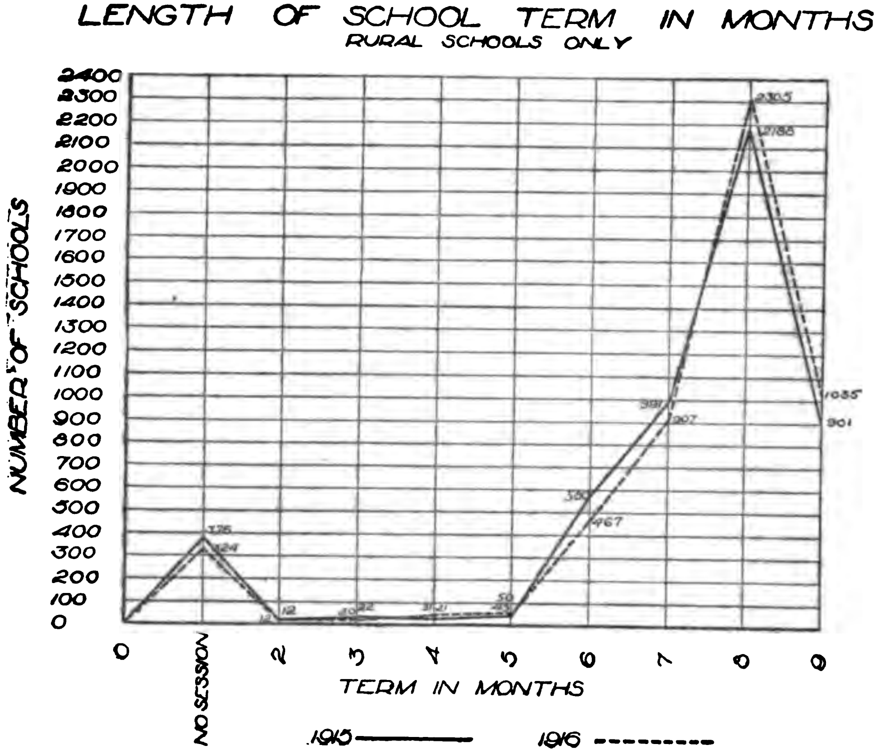

FIG. 8.

an attendance of 89.8 per cent and Oregon second with 89.7. The average for the United States is 75.5 per cent, which is 5.5 higher than for South Dakota. Low daily attendance, even more than poor enrollment, can be traced directly to an ineffective teaching process, due perhaps more to the small unit organization and all the weaknesses that go with it than to anything else.

Length of the school year.—The next question is, How many days in the year are the schools kept open for teaching purposes? In 1889–90 the schools of the State were kept open 145 days; in 1899–1900 they were open only 129.1 days; in 1909–10 this increased to 165.9 days; and in 1915–16 to 170 days. The actual average attendance of each person enrolled was only 118.9 days. Figure 8 shows graphically the length, in months, of 2,400 rural schools.

This important factor in school administration has been approached by the committee from another angle. A study was made, with the help of the county superintendents and teachers, of two rural schools in each county, one school being classed as "good," the other as "indifferent." The study included a calculation from the school registers for the last eight years, and shows exactly how many or how few days these children have spent in school. Figure 9 makes the standard of nine school months for eight years the basis of the graph. On this basis it is seen that the 30 schools are open for pupils, on the average, only 88 per cent of the time of the standard; and the average number of days in the school life of these 177 pupils is only 68 per cent of the standard.

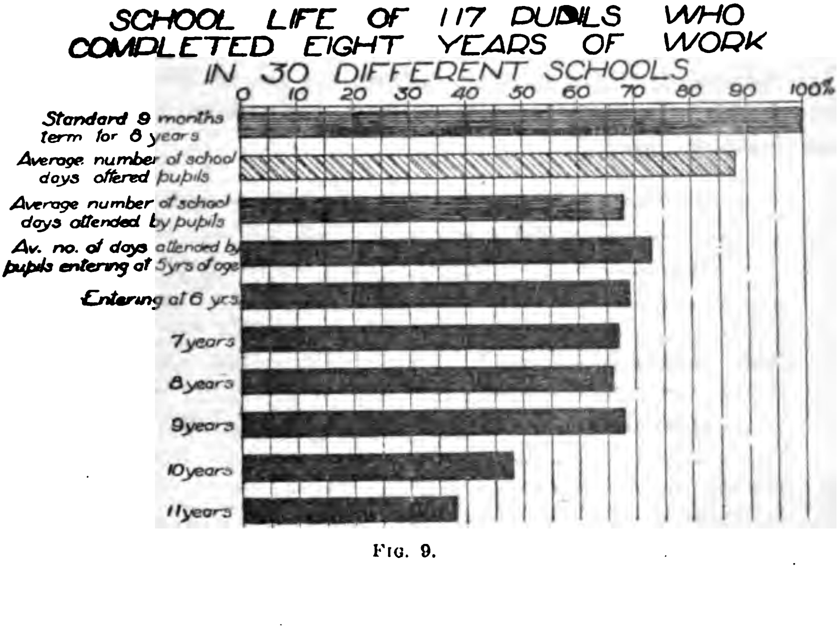

FIG. 9.

This fundamental weakness in South Dakota's public-school system is contrasted in the following figures with the length of the school year in all the different kinds of schools in the Canadian Province of Saskatchewan.

Rural, town, and village schools.

1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916
155.0	148.61	146.46	157.89	154.17	158.0	151.00	157	163	167	195
204.0	205.40	209.08	202.20	193.57	187.0	192.00	192	197	201	202
179.5	177.00	152.63	160.10	158.59	163.0	165.44	183	188	184	198

Saskatchewan was carved out of the old North West Territory about 12 years ago. It has realized from the inception of its provincial life that to utilize liberally the school plants which have been provided at great outlay is good policy. The Saskatchewan schools are annual schools, most of them being open throughout the growing season of the year. The longest vacation—about four weeks—comes usually immediately after the Christmas holidays, when the winter is most severe. Schools for an agricultural population should be in operation during the summer season, to make possible a utilization of the land for gardening and agricultural experimentation—out of which the new curriculum must largely spring. South Dakota would be wise to emulate the example of Saskatchewan in these matters.

Tables 7 and 8 give the enrollment and attendance by months for each of two groups of children: 32,000 rural children and 15,000 village children in South Dakota. The tables represent the best schools in the State. The 32,367 rural children enrolled in November, 1916, are reduced to 13,478 in May, because the schools close so early in the season. In these respects, at least, the village schools make a much better showing.

TABLE 7.—*School attendance by months—rural.*

Attendance.	November, 1916.	December, 1916.	January, 1917.	February, 1917.	March, 1917.	April, 1917.	May, 1917.	June, 1917.	July, 1917.	August, 1917.	September, 1917.	October, 1917.
Number enrolled	32,367	32,342	31,357	29,773	28,159	25,063	13,478	851			23,760	28,134
Average attendance	24,783	24,932	22,817	21,553	20,933	18,696	10,216	665			18,500	22,187
Percentage of attendance	76	77	72	72	78	74	74	78			77	78

TABLE 8.—*School attendance by months—village.*

Attendance.	November, 1916.	December, 1916.	January, 1917.	February, 1917.	March, 1917.	April, 1917.
Number enrolled	12,925	15,525	15,408	15,107	14,728	14,110
Average attendance	10,338	13,012	12,415	12,328	12,251	11,886
Percentage of attendance	79	84	79	82	83	86

Attendance.	May, 1917.	June, 1917.	July, 1917.	August, 1917.	September, 1917.	October, 1917.
Number enrolled	12,610	......	......	......	15,019	15,839
Average attendance	10,793	......	......	......	13,326	13,704
Percentage of attendance	86	......	......	......	88	86

Advancement of children in school.—Normal children are expected to enter school in this State at the age of 6 years. If they advance one grade each year, they should finish the elementary school course in their fourteenth year. Any average school, reasonably well taught and open for 8 to 9 months annually, should be able to prepare the pupils for their eighth-grade examinations in 8 years' time.

The survey committee has made an age-grade study of nearly 53,000 rural children and nearly 23,000 children in village schools, to ascertain just how early in life the children enter school, how rapid is their advancement, and how well sustained their attendance in school. The results are tabulated in Tables 9 and 10 below. Table 9 enrolls 52,923 children; of these 10,496 are in Grade I. Seventeen hundred and ninety-eight entered school before reaching the sixth year. They are under age and ahead of their classes. Four thousand nine hundred and sixty children are of normal age and grade; while 2,277 are one year behind normal grade; 648 are two years behind; 171, three years, and so on. A similar analysis can be applied to Table 10, with just as interesting results.

TABLE 9.—*Age-grade of 53,000 rural pupils.*

Grades.	Under 6.	Over 6 years up to 7.	Over 7 years up to 8.	Over 8 years up to 9.	Over 9 years up to 10.	Over 10 years up to 11.	Over 11 years up to 12.	Over 12 years up to 13.	Over 13 years up to 14.	Over 14 years up to 15.	Over 15 years up to 16.	Over 16 years up to 17.	Over 17 years up to 18.	Over 18 years up to 19.	Total by grades.
I	1,798	4,960	2,239	891	294	126	66	51	43	22	0	4	2	0	10,496
II	18.	1,019	2,522	1,755	708	269	125	61	27	20	0	1	0	0	6,525
III	......	105	855	2,171	1,507	865	305	153	77	42	16	8	3	1	6,108
IV	......	9	108	884	2,148	1,690	958	438	215	107	44	22	8	1	6,632
V	......	......	19	106	814	1,866	1,560	985	481	247	104	32	5	5	6,225
VI	......	......	......	11	142	799	1,600	1,703	1,013	558	295	90	26	3	6,240
VII	......	......	......	......	6	89	436	1,208	1,378	1,042	521	186	69	24	4,959
VIII	......	......	......	......	......	16	149	685	1,297	1,608	1,130	605	190	58	5,738
Total of ages	1,816	6,093	5,743	5,818	5,619	5,720	5,199	5,284	4,531	3,646	2,110	948	303	92	52,923

TABLE 10.—*Age-grade of 23,000 village pupils.*

Grades.	Under 6.	Over 6 years up to 7.	Over 7 years up to 8.	Over 8 years up to 9.	Over 9 years up to 10.	Over 10 years up to 11.	Over 11 years up to 12.	Over 12 years up to 13.	Over 13 years up to 14.	Over 14 years up to 15.	Over 15 years up to 16.	Over 16 years up to 17.	Over 17 years up to 18.	Over 18 years up to 19.	Total by grades.
I	492	2,277	648	171	58	10	3	2	3	0	2	......	......	......	3,666
II	7	480	1,495	585	180	48	19	9	1	1	......	......	......	......	2,825
III	......	40	519	1.299	663	238	80	43	9	11	5	0	1	......	2,908
IV	......	26	364	1,178	748	335	194	54	26	6	2	......	......	......	2,933
V	......	......	......	44	323	925	718	341	151	65	26	6	......	......	2,599
VI	......	......	......	3	24	326	864	689	353	183	91	33	5	......	2,571
VII	......	......	......	......	3	45	274	777	746	895	185	47	22	7	2,501
VIII	......	......	......	......	......	3	48	264	687	738	449	208	61	28	2,486
Total	499	2,823	3,026	3,280	1,999	1,930	2,200	2,179	1,976	1,399	760	294	89	35	22,489

Tables 11 and 12 summarize the data contained respectively in Tables 9 and 10. These summaries show conclusively that the rural and village children have not made the normal advancement in school that might have been expected. The tables disclose these two facts: (1) That an unusually large number of children—rural 51.17 per cent and village 39.87 per cent—are over age, and one or more years behind normal standing; and (2) that the wastage up through the grades is very large.

TABLE 11.—*Rural children under age, normal age, and over age.*

Grade.	Number in each grade.				Per cent in each grade.		
	Under age.	Normal age.	Over age.	Total.	Under age.	Normal age.	Over age.
I	1,798	4,960	3,738	10,496	17.13	47.26	35.61
II	1,037	2,522	2,966	6,525	15.90	38.65	45.45
III	960	2,171	2,977	6,108	15.71	35.54	48.74
IV	1,001	2,148	3,483	6,632	15.09	32.39	52.52
V	939	1,866	3,420	6,225	15.09	29.97	54.94
VI	952	1,600	3,688	6,240	15.26	25.64	59.10
VII	531	1,208	3,220	4,959	10.71	24.36	64.93
VIII	850	1,297	3,591	5,738	14.81	22.60	62.59
Total	8,068	17,772	27,083	52,923	15.25	33.58	51.17

TABLE 12.—*Village children under age, normal age, and over age.*

Grade.	Number in each grade.				Per cent in each grade.		
	Under age.	Normal age.	Over age.	Total.	Under age.	Normal age.	Over age.
I	492	2,277	897	3,666	13.42	62.11	24.47
II	487	1,495	843	2,825	17.23	52.93	29.84
III	559	1,299	1,050	2,908	19.23	44.67	36.10
IV	1,568	748	617	2,933	53.46	25.51	21.03
V	367	925	1,307	2,599	14.12	35.59	50.29
VI	353	864	1,354	2,571	13.69	33.65	52.66
VII	322	777	1,402	2,501	12.89	31.06	56.05
VIII	315	687	1,184	2,486	12.68	27.63	59.69
Total	4,463	9,072	8,954	22,489	19.85	40.34	39.87

Table 13 gives the grade range of rural children who, under normal conditions, should have reached the eighth year. Out of a total of 4,531 children who should have reached the eighth grade, all except 1,297, or 28.62 per cent, are still below that grade.

TABLE 13.—*Grade range of rural children who under normal conditions should be in eighth grade.*

Grades.	In Grade I.	In Grade II.	In Grade III.	In Grade IV.	In Grade V.	In Grade VI.	In Grade VII.	In Grade VIII.	Total.
Number of pupils	43	27	77	215	481	1,013	1,378	1,297	4,531
Per cent	0.94	0.59	1.69	4.74	10.60	22.35	30.41	28.62	100

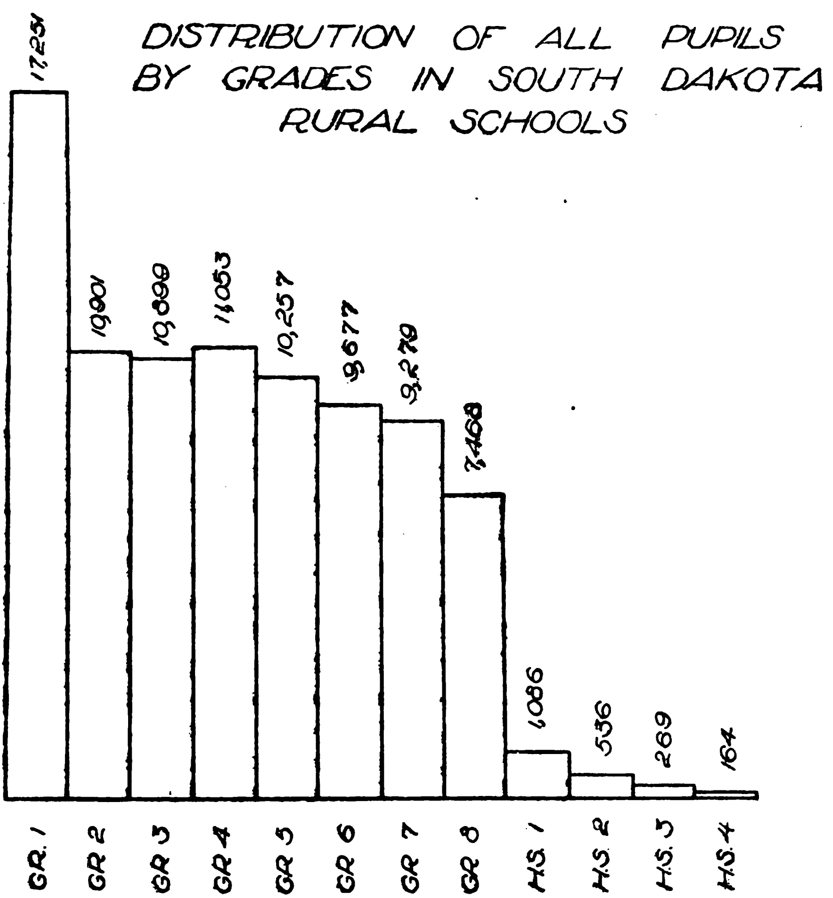

FIG. 10.

Figure 10 shows graphically the wastage up through the grades. This graph is based on the whole number of children enrolled in the rural schools. Grade 1 contains 17,251 pupils; this drops to 10,899 in Grade III, after which it increases to 11,053 in Grade IV. This great variation is due to loose classification of the beginners, who are often held as repeaters in the first grade and are later promoted direct to the third grade. When the eighth year is reached only 7,468 children remain out of the much larger total which was enrolled in the first grade. But now comes the most serious break; of all these children, only 1,086 enter rural high-school courses, dwindling finally to 164 students in the last year. To be sure some rural pupils do manage to attend high school in town.

As the educated leadership of rural communities must come from the schools, agricultural South Dakota must either seek this education away from the open country or go without the leadership.

Summary.—The State has invested millions of dollars in permanent school plants. This great investment is not utilized as fully as it should be. The chief cause is indifferent school organization and administration, and a teaching process that does not give the children the kind of instruction needed in this great agricultural State. This is proved by the comparatively small enrollment of school population and the low daily attendance. In enrollment of school population the State ranks twentieth among the 23 States comprising the Middle Western and Western groups; in daily attendance likewise it is twentieth. If the daily attendance were reckoned on the basis of school population instead of on enrollment, less than one-half of the school population would be in school daily. The school year is 170 days long. This is more than in the poorer States, but behind the better States. The schools ought to be reorganized as all-year schools, in keeping with the new kind of school proposed later in the report. An average pupil's school life is surprisingly short, because of late enrollment and irregular attendance. Very few rural children, unfortunately, get the advantages of secondary and higher schools. Nearly all the culture and all the technical and practical education of South Dakota farm folk must be acquired in these small schools, during the short period now allotted to school life. Every thoughtful person will agree that the level of cultural and practical leadership can not be raised much before radical changes are made in the organization of the small schools, chiefly the rural schools.

Recommendations.—The survey committee recommends: 1. A careful annual census of the school population in all school districts of the State, to be made by the authorities now provided by law, but under immediate supervision from the State department of public instruction, on uniform blanks to be furnished by the State. The census should classify the school population as follows: 5 to 18 years; 6 to 21 years; over 8 and under 16 years; 6 to 14 years; and over 14 to 18 years. This would give the desired basis for a complete classification for State and Federal uses.

2. The compulsory attendance act to be enforced by, and responsibility for enforcement placed on, the State department of public instruction working through the county boards of education.
3. A system of records to be perfected by the State department of education, to be used in transferring pupils from community to community, that will make evasion of school attendance impossible.
4. A practical reorganization of the school year as follows: The school year to open January 1 of each year, at which time new teachers are to be hired and school work begun. This would make it possible to retain the same teachers for both spring and fall of the year, and make easy the utilization of the school premises for gardening and agricultural experimentation (see p. 70).
5. Appropriate legislation to lengthen the teaching year to a minimum of 9 months of 20 teaching days each; provided that the teaching hours may be shortened during the season of the year when the pupils' labor is essential to agricultural and other industrial work.

Chapter IX.

SCHOOL SUPPORT: WHAT THE STATE PAYS FOR EDUCATION.

Sources of support.—The sources of school support in the State of South Dakota are local taxes levied by the local school districts and township school district, county taxes, and sundry income from the State permanent fund. In addition to these sources recourse may be had to the sale of bonds when the schools require funds for the purchase of school sites and the construction of school buildings. South Dakota is one of a small group of States which do not levy a general State tax for education. The other States of this group are Idaho, Oregon, and Wyoming.

Rate and amount of taxation.—The local taxes are levied by the district school board, which may, under law, raise for all purposes not to exceed 20 mills on the dollar yearly; but the regular annual tax levy must not exceed 10 mills of the assessed value of property in common school districts, nor exceed 15½ mills in independent school districts. Boards may issue bonds not to exceed 4 per cent of the assessed valuation of the property, with the approval of the governor. The money thus raised, as previously mentioned, is to be used solely for the purchase of school sites and the building of schoolhouses.

The county tax is placed by the county commissioners, who levy a tax of $1 on each elector of the county. The proceeds of this tax go to support the common schools. The money is distributed in proportion to the number of school children between 6 and 21 years.

Additional funds are secured from fines collected in the course of enforcing the laws, such as the laws that deal with the removal of timber or wood from school, public, or endowment lands; the general compulsory school attendance; child labor; and laws which prohibit the making of false reports by district school board clerks or treasurers, or which penalize the failure of the State superintendent or district officers to report.

The State permanent school fund consists of the proceeds from the sale of school lands, which are invested in farm mortgages, county, school, and municipal bonds, and of deferred payments on outstanding contracts.

The State permanent school fund.—The schools of South Dakota are especially fortunate in the way they have been endowed with school lands. Through a policy of wise forethought the State has conserved for school use 2,339,912 acres of common-school land, and 597,285 acres of endowment and public-building lands, making a total of 2,937,197 acres. At the close of the fiscal year ending June 30, 1917, the permanent school fund amounted to $9,112,076.07, while the deferred payments on school land contracts amounted to $4,820,226.94, making a grand total of $13,932,303.01. All this amount is drawing interest at the rate of 5 and 6 per cent. The interest and income apportioned to the common schools on December 1, 1917, was $1,113,324.02, or $6.22 per capita for each child of school age in the State. Besides this, there was apportioned to the higher educational institutions and schools for defectives and the industrial schools for the fiscal year 1917, $111,925.89.

The source of this income has been wisely protected by law, which prohibits the school lands from being sold at less than $10 per acre. It is believed that when all the school lands are finally sold there will be a permanent fund of at least $90,000,000, as the present price paid for these lands averages from $17 to $40 per acre.

Growth of receipts and expenditures.—Tables 14, 16, and 19 show the general tendency with respect to receipts and expenditures of funds used in the support of the public schools in the State for the past four years.

TABLE 14.—*School moneys received during the last four years.*

Year.	Income of permanent school funds and rent of school lands.	From State tax or appropriation.	From local tax or appropriation.	From other sources, State and local.	Total, excluding balances on hand and proceeds of bond sales.
1912-13	$767,005		$2,260,244	$259,908	$3,287,157
1913-14	992,954		4,061,654	241,920	5,299,528
1914-15	1,002,655		4,277,784	337,992	5,618,361
1915-16	1,016,274		4,716,029	328,254	6,060,557

The table above indicates that there has been relatively little increase in the income from the permanent fund during the last three years, the principal gain being in the amount of local tax levied. A slight loss is indicated in the amount derived from other sources.

TABLE 15.—*Sources of receipts during the years 1915 and 1916.*

Sources.	Rural districts.		Independent and consolidated districts.		All districts.	
	1915	1916	1915	1916	1915	1916
Balance on hand, close fiscal year	$1,155,303.62	$1,257,064.08	$413,146.77	$824,476.76	$1,568,450.39	$2,081,540.84
Received from apportionment	696,175.23	707,998.57	306,479.27	308,274.96	1,002,654.50	1,016,273.53
Received from tax	2,562,749.39	2,846,586.76	1,715,034.65	1,869,442.95	4,277,784.04	4,716,029.71
Received from sale of bonds	131,610.53	239,762.59	716,515.64	282,578.48	848,126.17	522,341.07
Received from all other sources	109,575.43	120,881.19	228,347.01	207,372.41	337,922.47	328,253.60
Total	4,655,414.20	5,172,293.19	3,379,523.37	3,492,145.56	8,034,937.57	8,664,438.75
Total, excluding bond sales	3,500,110.58	3,915,299.11	2,966,376.60	2,667,668.80	6,466,487.18	6,582,897.91
Total, excluding bond sales and balance on hand	3,368,500.05	3,665,466.52	2,250,860.96	2,385,090.32	5,618,316.01	6,060,556.84

It appears from the above table that the amount received from the sale of bonds in 1915 was more than 10 per cent of the total receipts; in 1916 this proportion was nearly 6 per cent.

Expenditures.—While no attempt has been made to compare the relative growth of receipts and expenditures, Tables 16 and 19 are included to show the growth of expenditures for public education in the State during the last quadrennium.

TABLE 16.—*Expenditure for public school education, based on school enrollment.*[1]

Year.	Total expenditure.	School enrollment.	Per capita expenditure.	Year.	Total expenditure.	School enrollment.	Per capita expenditure.
1912-13	$4,109,642	132,764	$30.96	1914-15	$5,065,508	130,842	$38.72
1913-14	4,538,026	130,812	34.68	1915-16	5,784,086	134,136	43.12

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[1] Based on the Annual Report of the United States Commissioner of Education for 1915-16.

If one compares South Dakota with the other 22 States in the north central and northwestern sections, the position of the State is not so favorable.

TABLE 17.—*Amount expended on public schools for each child 5 to 18 years of age (1915-16).*

1.	Montana	$65.71
2.	California	56.24
3.	Nevada	43.73
4.	Arizona	42.60
5.	Washington	38.91
6.	Wyoming	38.81
7.	Oregon	36.61
8.	Idaho	36.55
9.	North Dakota	36.43
10.	Iowa	35.60
11.	Utah	35.51
12.	Indiana	34.13
13.	Minnesota	33.87
14.	Colorado	$33.46
15.	Ohio	33.37
16.	Michigan	32.03
17.	Kansas	31.79
18.	Nebraska	31.37
19.	*South Dakota*	29.72
20.	Illinois	29.07
21.	Wisconsin	24.30
22.	Missouri	19.97
23	New Mexico	16.76
	United States	23.87
	Average	35.50
	Median	34.13

TABLE 18.—*Amount expended on public schools for each child 5 to 18 years of age in average attendance (1915–16)—North Central and Western States only.*

1.	Montana	$86.37
2.	California	78.17
3.	Arizona	77.85
4.	Nevada	76.26
5.	North Dakota	69.62
6.	Washington	68.33
7.	Idaho	63.26
8.	*South Dakota*	*61.26*
9.	Wyoming	57.65
10.	Minnesota	57.22
11.	Colorado	55.90
12.	Ohio	52.88
13.	Oregon	52.59
14.	Iowa	$52.15
15.	Indiana	51.77
16.	Utah	50.84
17.	Nebraska	50.06
18.	Kansas	49.40
19.	Michigan	47.66
20.	Illinois	45.16
21.	Wisconsin	44.90
22.	New Mexico	38.79
23.	Missouri	33.65
	United States	41.72
	Average	57.50
	Median	52.88

TABLE 19.—*Growth of expenditure per capita of population and relative rank of South Dakota among the Middle Western and Western States.*

Year.	Amount per capita.	Relative rank.	Year.	Amount per capita.	Relative rank.
1912-13	$6.39	27	1914-15	$7.45	16
1913-14	6.86	32	1915-16	8.23	14

According to the Annual Reports of the United States Commissioner of Education, upon which Table 19 is based, in the year 1912–13 South Dakota ranked twenty-seventh among all the States in expenditure for public schools per capita of total population. In 1913–14 the State ranked thirty-second, the ratio of increase in expenditure per capita having fallen considerably. In the year 1914–15 the State ranked sixteenth, and in the year 1915–16 it was the fourteenth in rank, with an expenditure of $8.23 per capita of total population. Montana ranks highest in per capita expenditure of total population, with $14.14, which exceeds the expenditure of South Dakota by nearly 70 per cent.

According to Table 17, South Dakota ranks nineteenth among the 23 States under comparison with respect to the amount expended on public schools for each child 5 to 18 years of age (1915–16). A glance at the table shows that the State is considerably lower than either the average as represented by Utah or the median as represented by Indiana. Compared with Montana, California, and Washington, States which are giving much attention to the development of good public-school systems, the showing of South Dakota is very poor.

According to Table 18, however, South Dakota ranks much higher, although the amount expended on each child 5 to 18 years of age, based on average attendance, is only $3.61 more than the average, which is approximately $57.65, or that of Wyoming. Washington is expending over 11 per cent more than South Dakota, and California exceeds the latter State by over 27 per cent in this type of expenditure.

Readjustment of the basis for division of taxation.—According to Table 20, three important features in the present tax system deserve special consideration. The first is the relatively large proportion of income derived from the permanent funds as compared with the other States, South Dakota being exceeded in this respect by Nevada with 21.91 per cent and Wyoming with 38.8 per cent (1915–16).

TABLE 20.—*Percentage analysis of school revenue.*

Year.	Derived from permanent funds.	Derived from local tax, etc.	Derived from other sources.	Year.	Derived from permanent funds.	Derived from local tax, etc.	Derived from other sources.
1912–13	23.33	68.76	7.91	1914–15	17.85	76.14	6.01
1913–14	18.74	76.64	4.62	1915–16	19.50	74.20	6.30

This proportion of 19.50 per cent is high, compared with the average for the North Central division of States—3.12 per cent and the average of the western division—7.95 per cent.

The second feature is the absence of a general State tax for public-school support. This State tax averages for the entire country 15.03 per cent of the total school revenue. In the North Central division of States it amounts to 10.72 per cent, in the North Atlantic division 12.51 per cent, in the Western division 18.57 per cent, in the South Atlantic division 24.91 per cent, and in the South Central division 29.87 per cent.

The third feature is the relatively large proportion of school revenue which is raised by local district taxation, the county tax being of little significance. It is of interest to note that the taxpayers of the local districts are defraying about three-fourths of the public-school expenditure of the State. While this proportion differs but slightly from the average proportion for the entire country, yet in the light of the peculiar characteristics of the State there is evidence of the need of a redistribution of the burden and responsibility of taxation.

If the school districts were homogeneous in character, if there were a general equality of population, industrial activity, and wealth, as well as in educational aims, the district method of taxation might receive less criticism. But such equality of conditions does not hold to any great extent in any State, and certainly it does not hold in South Dakota.

South Dakota may be roughly divided into four geographical sections: The first includes 10 western counties with no railroads, few, if any, important tax-producing industries, and a meager population of 21,946 inhabitants; the second section includes 24 counties with a small railroad mileage, a corresponding amount of taxable industries, and a population of 127,337; the third section includes 20 counties with considerable railroad mileage, a fair proportion of taxable industries, and a population of 200,032; the fourth section, which is largely in the eastern part of the State, includes 13 counties which have an extensive railroad mileage, a corresponding large proportion of taxable properties and industries of importance, and a population of 208,746.

It is perfectly natural to expect under the conditions mentioned above that there will be great difference in the character of the school districts of the State. It is evident that the school districts which are on the railroads will tend to be more populous, industrial, and to a certain extent more prosperous than those situated more distant. The schools of these wealthier and more populous districts can be operated to a greater advantage than can those which are in poorer and less populous communities. The larger average attendance and the correspondingly low per capita cost are not possible in the more remote and less-favored regions. The fluctuating population in many of the rural centers also tends to retard continuous and consistent development of the public-school support.

In many districts where consolidation of schools has been effected a lack of financial means still causes inefficiency, hardships, and a slowing up of educational progress of the community.

State and county taxes.—Notwithstanding the generous attitude of the people of the State toward public education, it is apparent that the present plans of school support are antiquated, inadequate, and entirely unsuited to a progressive, wealthy, and growing commonwealth of the rich Northwest. There is need of definite plans of support which will insure the successful carrying out of the best educational policies throughout the entire State. Especial attention should be given to the weaker, pioneer districts.

It is the conviction of the committee that a sound and progressive State policy of public education will be materially helped by shifting the burden of taxation. First, the county should be the responsible unit of local educational support in harmony with the plans of the State as a whole. In this manner it will be possible to equalize the conditions of taxation and expenditure within the constituent districts. The local districts should be allowed to supplement the county tax in order to more fully realize local ideals, because the county tax may not always be sufficient for that purpose. The county tax tends to insure a fair taxation and expenditure throughout its borders, but at that point it reaches its limitation.

In order to safeguard the interests of the State as a whole and develop the larger sections which are in need of help, a permanent

State tax is necessary. While South Dakota is blessed with an excellent income from its permanent funds, this is not a sufficient amount to meet the needs of an aggressive State policy. In the second place, the State should levy an annual school tax which, in addition to the income from the permanent funds, would amount to one-third of the total public-school revenue. Such a proportion properly expended will tend to equalize conditions throughout the State. The experience of some of the most progressive State school systems, such as are found in California, Washington, and New Jersey, shows the great value of a well-directed State tax of good proportions. According to the best information the majority of the public schools lying in the more remote and poorer districts of California and Washington are as well supported as the schools in the more favored and more populous communities.

The proceeds of the State tax should be used to extend a special aid to poor districts in the sparsely settled sections of the State where consolidation of schools is yet impracticable. It might also well be used as a stimulus to further consolidation of schools, and in assisting communities to maintain teacher-training departments in high schools; also for the association of district schools and for the maintenance of rural high schools. The amount of aid granted should be based on the aggregate daily attendance and the number of teachers employed rather than on the total school population of the county district, the proportion being two-thirds on aggregate attendance and one-third on the number of teachers employed.

Public education involves continually growing expenses.—The essential characteristics of first-class educational support are stability and growth. A fluctuating income can not bring good results. It is therefore necessary to raise and expend as large an amount of money as the State and the counties can afford in order to reach the maximum of efficiency. A study of the expenditures in some of the States with first-class public-school systems shows that these States have been willing to do nearly twice as much as South Dakota in order to reach their goal. Public education can not be a money-saving process. The present conditions in this country demand a much larger expenditure than usual in order to obtain the needed efficiency of school service.

Summary of recommendations.—The committee believes that the stability and growth of the public-school system in South Dakota require certain definite modifications in the present system of taxation. To this end it recommends:

1. The adoption of the county as the unit of local taxation; the funds when collected to be used to equalize educational advantages over the county.

2. The local school community to be authorized to levy taxes or to issue bonds for extraordinary purposes only, such as erecting new buildings and procuring larger sites and school farms.

3. The levying of a State tax equivalent to one-third of the whole school maintenance of the State (including the present permanent school fund).

4. The adoption of a permanent millage tax for the maintenance of the State's higher educational institutions, to be apportioned according to the needs of each institution, to supplant the present legislative appropriations.

5. The adoption of a new basis for the distribution of the present State permanent fund and future State taxes as follows: (*a*) The permanent fund to be distributed on the basis of aggregate daily attendance and the number of teachers employed, instead of as at the present on the basis of school population, provided that weak schools in sparsely settled sections of the State be credited with not to exceed 2,000 attendance days in addition to their actual aggregate daily attendance; (*b*) the proposed State taxes to be awarded for consolidation of schools, establishment of rural and other high schools, teacher training in high schools, etc., only when the local school communities have indicated their cooperation by agreeing to certain requirements made by law, as a stipulation under which such aid may be received.

Chapter X.

PRESENT STATUS OF RURAL SCHOOL PLANT AND ITS ADAPTABILITY TO PUBLIC NEEDS.

Introduction.—Before it can be decided whether a school meets the needs of a locality it is necessary to know both the community and the school. The opening chapter of this survey gives sufficient information, relative to the State and its people, for the reader to form an intelligent background of the community that is to be served by the school. Other chapters have enlarged upon the organization, administration and supervision of rural schools, their daily attendance, course of study and status of instruction. However, these do not comprise all the essentials of a school. In judging the efficiency of any enterprise in the industrial world the first consideration is generally given to the plant. This is no less true of the school. The attendance, course of study, and instruction are, in a greater or less degree, limited or expanded by the existing school plant. A study of the plant includes the grounds, buildings, equipment, and sanitary conditions. These form the basis for discussion in this chapter. The conclusions are based upon answers to questionnaires sent the teachers and from personal observations in eight counties representative of typical areas of the State. Questionnaires, either wholly or partly answered, were returned by 5,301 teachers. This represents over 90 per cent of the entire number of teachers. Of the questionnaires returned, 3,941 were from teachers in open country schools and 1,360 from teachers in villages.

School locations.—The following table gives the teachers' estimate of the area of the school grounds:

TABLE 21.—*Size of school grounds.*

Area.	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
Less than ½ acre	148	5	18	4
Half acre	378	12	34	8
One acre	1,687	56	197	46
More than 1 acre	817	27	178	42
Total	3,030	100	427	100

Comparison of the data indicates that the area of over half of the grounds in the open-country school is 1 acre. Forty-two per cent of the village grounds contain more than 1 acre. The encouraging thing is that there are more grounds in both types of schools with more than 1 acre than with less than 1 acre. Replies were received from 3,388 teachers in open country and from 482 in the villages, as to whether the grounds were fenced. In the open country the grounds of 996 schools, or 29 per cent, were fenced, and in village schools 164, or 34 per cent, were fenced.

These replies from teachers indicate that a larger percentage of school grounds in village schools are fenced than in open-country schools. Nineteen per cent of the open-country schools report woven wire as the kind of fencing used.

Playgrounds.—Even though the school ground may consist of the traditional acre, the buildings are often placed in such a position as to prohibit the utilization of the greatest possible playground space. The following table shows the conditions in South Dakota:

TABLE 22.—*Size of playgrounds.*

Size.	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
No playground	50	2	....	....
One-quarter acre	184	8	20	5
One-half acre	473	20	60	17
Over ½ acre	1,652	70	273	78
Total	2,359	100	353	100

The fact that grounds are reported with no playgrounds, or with one-fourth or one-half acre, seems to establish the fact that the buildings are not placed to the best advantage for the utilization of play space. In fact, the tendency is to place the school building in the center of the school lot.

On playground apparatus 3,427 rural teachers reported. Of this number 270, or 8 per cent, reported some equipment in this line. The condition is much better in the village schools. Replies from 486 teachers indicate 34 per cent with playground apparatus.

Experimental plats.—This includes small garden plats and larger plats used for experiments in agriculture. The results are based on answers from 3,488 teachers in the open-country school and 402 in the villages. The percentages are as follows: Open-country schools with experimental plats, 8 per cent; village schools with experimental plats, 61 per cent.

Condition of buildings.—The opinions of 3,486 rural teachers and 368 village teachers on the condition of repair of the school building are given on page 60.

TABLE 23.—*Condition of buildings.*

Condition.	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
Good	1,123	32	211	58
Fair	1,576	45	115	31
Poor	787	23	42	11
Total	3,486	100	368	100

In the teachers' judgment the rural-school buildings are good in 32 per cent of the schools and fair in 45 per cent. Fifty-eight per cent of the buildings in villages are reported good. The observers were impressed with the generally good upkeep of the school buildings.

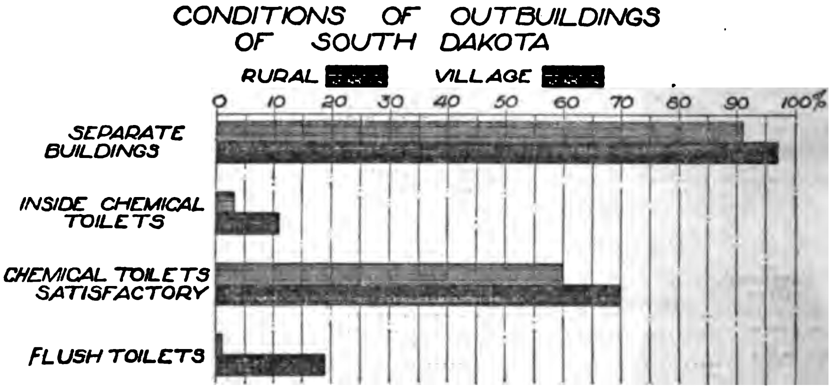

FIG. 11.

Outbuildings.—The data received from the questionnaires relative to outbuildings comprise information concerning location of outhouses and chemical and flush toilets. The tabulations are given below:

TABLE 24.—*Outbuildings.*

	Open country.		Village.	
	Total replies.	Per cent replying yes.	Total replies.	Per cent replying yes.
Separate outbuilding	3,727	91	506	97
Chemical toilets	3,442	3	404	77
Chemical satisfactory	108	60	48	70
Flush toilets	3,230	1	342	19

The prevalent type of outbuildings for open-country schools is to build both boys' and girls' toilets under one roof, and separate them by a coal bin. No instances of chemical or flush toilets in rural schools were observed by the survey committee.

Lighting.—In measuring the correctness of schoolroom lighting consideration is given to the placing of the windows, to the relation of window space to floor space, and to the presence or absence of shades.

An examination of the data below, which are based on reports from teachers, indicates that 70 per cent of the open-country schools are cross-lighted and that the maximum window placing for village schools is 39 per cent left and rear.

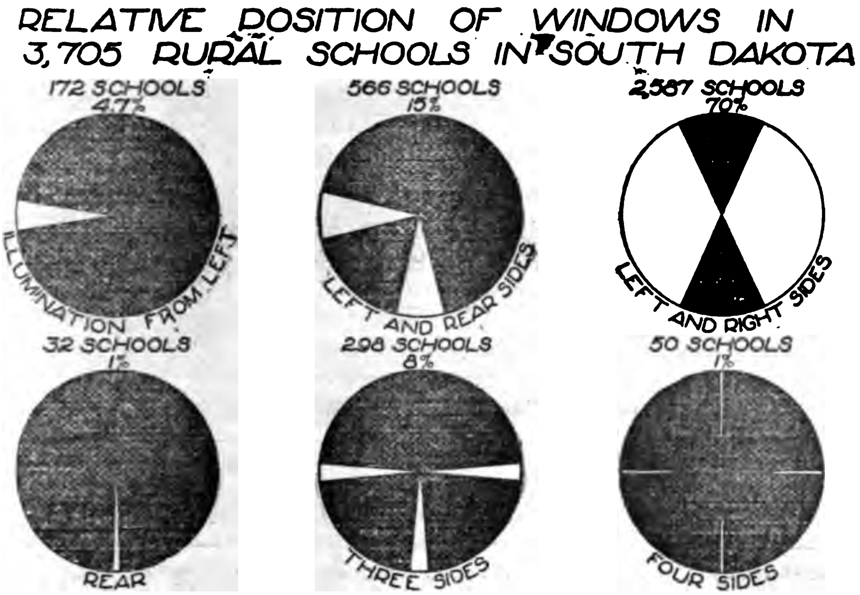

FIG. 12.

TABLE 25.—*Lighting exposure.*

Window placing.	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
Left	172	5	77	13
Left and rear	566	15	228	39
Rear	32	1	18	3
Left and right	2,587	70	178	31
Three sides	298	8	68	12
Four sides	50	1	9	2
Total	3,705	100	578	100

Replies were received from 3,296 teachers in open-country schools and from 486 teachers in village schools concerning the relation of window space to floor space. These results are as follows:

TABLE 26.—*Relation of floor space to window space.*

Window space vs. floor space.	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
Less than 10 per cent	493	15	72	15
11 to 15 per cent	972	30	152	31
16 to 20 per cent	814	25	114	24
21 to 25 per cent	495	15	83	17
Over 26 per cent	522	15	65	13
Total	3,296	100	486	100

A comparison of the above data shows that more than two-thirds of the rooms in both open-country and village schools have insufficient light. The median is 17.12 per cent for the open country and 16.6 per cent for the villages.

These estimates of teachers on the lighting in open-country schools are quite in keeping with the conditions found by the survey committee. It is stated in the chapter on "Instruction and supervision in open-country and village schools" that the observers found the lighting unsatisfactory on one or all points in 79 per cent of the open-country schools and in 38 per cent of the village schools.

Heating and ventilating.—The replies of teachers on the subject of heating and ventilation are given below:

TABLE 27.—*Heating.*

Means.	Open country.		Village.	
	Number.	Per cent.	Number.	Percent.
Unjacketed stove	1,993	55	114	20
Jacketed stove	1,323	36	150	26
Furnace	338	9	306	54
Total	3,654	100	570	100

TABLE 28.—*Ventilation.*

Means.	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
Ventilating system	1,350	36	304	55
Windows	2,209	58	210	38
Other arrangement	210	6	37	7
Total	3,799	100	551	100

In these answers there is nothing to indicate whether sanitary heating and ventilating plants are included under the term "stove (jacketed)" or "furnace." It is probable that there has been some overlapping in the answers on these two items. The significant thing in the answers is that more than half of the open-country schools are heated by unjacketed stoves. The observers found heating and ventilating systems or furnaces in 46 per cent of 48 open-country schools and in 82 per cent of 89 rooms in the villages.

It is only natural that 58 per cent of the open-country teachers should report windows as the only means of ventilation. Systems of ventilation in 55 per cent of the village schools are quite identical with 54 per cent of the village schools heated by furnaces.

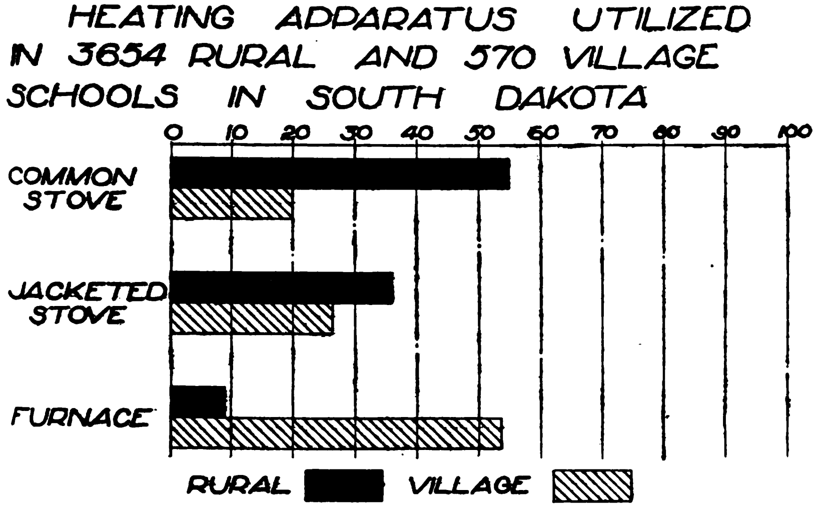

FIG. 13.

Drinking water.—A study of the drinking water includes information on the source of the water supply, its purity, and facilities for drinking. These replies from teachers are as follows:

TABLE 29.—*Source of water.*

	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
Well on grounds	286	7	80	14
Neighbor's well	2,030	52	191	34
Spring	102	3	9	2
Cistern	366	9	86	16
Other supply	372	9	151	27
None	779	20	40	7
Total	3,935	100	557	100

The term "other supply" refers to children bringing their drinking water from home in bottles, jugs, or the like. "None" probably means that the pupils are not supplied with drinking water or that the district makes no provision for the same. The observers regretted to find many schools without any drinking water whatever.

According to the teachers' reports 52 per cent of the open-countr schools carry the water from a neighbor's well. In a State like Sout Dakota, where settlement is not close, this often means that litt children must carry water a long distance. In cold weather the temptation is to go without it rather than make the effort to go for it.

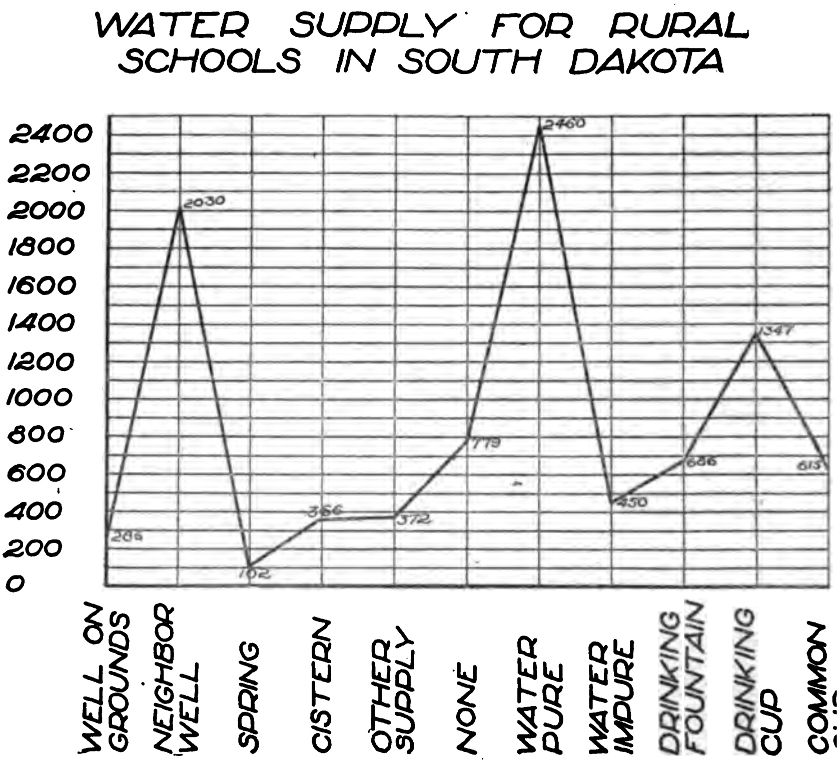

FIG. 14.

Relative to the purity of the drinking water, 2,910 open-countr teachers and 359 village teachers gave their judgment. The following figures represent the percentage of teachers in open country an village who believe their drinking water is pure: Open country, 8 per cent; village, 92 per cent.

TABLE 30.—*Facilities for drinking.*

Facilities.	Open country.		Village.	
	Number.	Per cent.	Number.	Per ce
Drinking fountain	686	25	251	
Individual cups	1.347	51	157	
Common cups	615	24	19	
Total	2,648	100	427	

The significant thing in the above table is that the common drinking-cup is still used in 24 per cent of the open-country schools and in 4 per cent of the village schools.

Janitor service.—Replies were received from 3,674 open-country teachers and 418 village teachers, relative to the employment of janitor. The replies show the following percentages employing a janitor: Open country, 4 per cent; village, 75 per cent.

Three thousand eight hundred and ninety open-country teachers reported that the floor was swept daily. This represents 99 per cent of the entire number of teachers reporting. Only 34 per cent of the village teachers reported in the affirmative to this question. The remainder made no answer whatever. The observers found the floors in village school's in a better state of cleanliness than in the rural schools. The method of sweeping was indicated by 3,783 teachers in the open-country schools and 402 teachers in the village schools. From the percentages given below it seems that in approximately one-half of the open-country schools no dust-gathering material is used in sweeping:

		Rural.	Village.
Dry sweeping	per cent	51	16
Dust-gathering material	do	49	41

As to frequency in scrubbing the floors, 3,511 open-country schools and 432 village teachers reported. These results are given below:

TABLE 31.—*Floors scrubbed.*

Frequency.	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
Weekly	75	2	29	6
Monthly	706	20	92	21
Yearly	2,427	69	281	64
Never	303	9	38	9
Total	3,511	100	440	100

The tendency to scrub the floors once a year seems, from the above, to be very pronounced in both open country and village schools. This is evidently a feature of the yearly house cleaning. The method of dusting was given by 2,768 teachers in open-country schools and 399 village teachers. The results of the tabulation are given below:

		Rural.	Village.
Dry dusting	per cent	57	19
Dusted in oil	do	43	24

Equipment.—Information was also received relative to blackboard space and desks as follows: Sufficient blackboard space: Open country, 70 per cent—3,232 replies; village, 85 per cent—431 replies.

TABLE 32.—*Desks.*

Kinds.	Open country.		Village.	
	Number.	Per cent.	Number.	Per cent.
Stationary	3,034	83	433	81
Adjustable	605	17	101	19
Total	3,639	100	534	100
Single	1,909	51	442	78
Double	1,624	46	126	22
Total	3,533	100	568	100

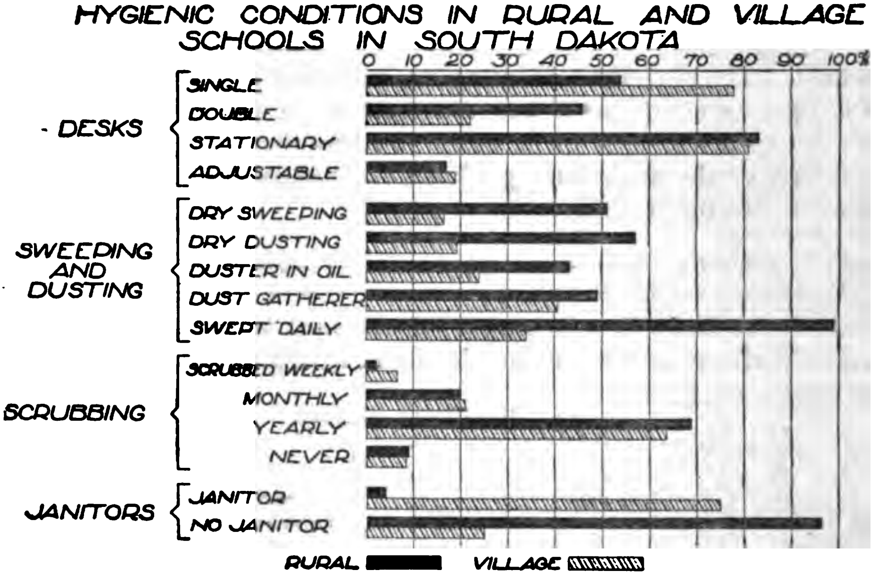

FIG. 15.

The percentage of sufficient blackboard space is somewhat higher than that found by the observer. The teachers reported 70 per cent and the observer 58 per cent for the open-country schools; for village schools it was 85 per cent (teachers), 72 per cent (observer). Probably a difference in standards may account for a part of the range of percentages. The percentage of single seats reported by teachers was also higher than that reported by the observer, viz, open country, 54 per cent (teachers) and 48 per cent (observer); village, 78 per cent (teachers) and 65 per cent (observer).

The existing school plant not meeting public needs.—Interpreting the present study on physical status in terms of highest percentages and medians, it appears that the school in the open country of South Dakota is a small cross-lighted building situated on the traditional acre of ground or less; its relation of window space to floor space is

17.12 per cent; it is heated by a stove; and windows are the only means of ventilation. The outbuildings are separate and outside the building. The source of water supply is from a neighbor's well. Most children have individual drinking cups. The teacher acts as janitor. The floors are swept daily and scrubbed once a year. The desks are stationary, about half and half single and double.

In the towns and villages of 1,000 or less the conditions are better. A larger per cent of grounds contain more than 1 acre; two-thirds of the grounds have experimental plats; about one-third of the buildings are equipped with chemical or flush indoor toilets; lighting is from the left, rear, and left and rear; heating is by means of furnace or sanitary stove; and janitors are employed.

The open-country school plant just reviewed is, with minor changes, the same that served country folk in America 75 years ago. It has been stated in the first chapter of this survey that South Dakota is, with the small exception of the Black Hills area, an agricultural and grazing State. In every village the grain elevators, silhouetted against the sky, bespeak great grain-shipping centers. These elevators are filled with corn, wheat, oats, and rye, harvested from surrounding fields. The soil for these fields is often turned, not by spans of mules and walking plows, but by tractors, with records of 40 acres for a single day. Likewise, the South Dakota farmer is no longer living the isolated life of the farmer of 75 years ago. The rural mail route brings him the daily paper from the metropolis, and after his day's work in the great out-of-doors he may sit in his comfortable home and read of yesterday's events from the battle fields of Europe. With the replacing of the horse and buggy by the automobile, his neighborhood has expanded far beyond the confines of the local school district.

But does the existing school plant meet the public needs? The answer is self-evident. Just as the agricultural plant and its operations of three-quarters of a century ago do not meet the needs of the South Dakota farmers of to-day, so likewise a school plant of a type three-quarters of a century old can not meet the present educational needs of rural South Dakota.

The kind of school plant that will meet public needs.—The consolidated school, which is discussed in the next chapter, is the school best fitted to serve rural people. Such a school is possible in much of South Dakota. In some sections of the State a two-teacher school would represent all the consolidation possible, and still in other localities the one-teacher school must for many years to come be the only school that can serve the people.

The area of the school ground should be large enough to accommodate the school building with its setting of lawn, trees, and shrubbery; the teacherage and its garden spot; the playground and agricultural plot. The size of the grounds would largely depend upon the kind of school. In no case should it be less than 5 acres. It is highly desirable that grounds be fenced as a protection against stray live stock.

The building should be provided with classrooms sufficient to accommodate both the academic and industrial subjects of the curriculum. The high-school assembly room and adjoining classrooms should be connected with folding doors so that they may be thrown together for community meetings. The difficulty in finding suitable boarding places is everywhere recognized as one reason why many efficient teachers refuse to teach in rural districts. The country can not expect to procure the services of married men teachers when there is no opportunity for them to have a home. The teacherage is as necessary a part of the rural-school plant as is the parsonage a necessary adjunct to the church plant. From a physiological point of view play is as necessary to the child's development as are food and drink. For this reason the school can best serve the child when provision is made for ample playground and play apparatus. It has been suggested in the discussion of the course of study that agriculture and nature study should find a large place in the rural-school curriculum. To teach these subjects effectively there must be a portion of the school ground reserved as laboratory.

All plans for school buildings should be approved by the division of school architecture and sanitation of the State department of education before permission be granted the school board for their construction. The best authorities on schoolroom lighting agree that the light should enter from the left and rear and that the window space, in regions with the latitude of South Dakota, should equal one-fourth of the floor space. Furnaces or sanitary heating and ventilating plants should be used in heating the school buildings. The most satisfactory means of ventilation is that provided by an effective artificial system. The standard heating and ventilating plants, when properly managed, provide effective ventilation. No matter how satisfactory artificial ventilation may be, every possible opportunity should be used for ventilation by doors and windows. For this reason storm windows should be adjusted so that their presence will not hinder window ventilation.

The rural-school privy has long been a source of physical and moral infection. It is usually dirty, with marks of obscenity and considered by possible vandals of the neighborhood as a fit object for depredation. Whenever practicable the toilets should be placed indoors. When there is an abundant supply of well water the flush-tank system can be used. A pressure tank set in the basement or buried in the ground outside the building can be attached to the pump of the well. A septic tank, buried below the frost line, would provide a sufficient disposition of the excreta. If out-door privies must be used they should be screened and be kept clean and sanitary.

An abundant supply of pure water is as necessary a part of the school's equipment as is an effective heating system. Whenever it is possible to obtain flowing water there should be a well on the school grounds with a pressure tank in the basement and such plumbing arrangements as would make the conveniences of a city water system possible for the open country. There are, however, places in South Dakota where it is impossible to reach underground water. In these localities farmers are often compelled to carry their water long distances. Schools located in such places should be provided with well-filtered cisterns, dug deep enough in the ground to be protected from frost. These cisterns should preferably be set under the building. Where it is necessary to provide water in this way constant vigilance is necessary to keep the cisterns in a sanitary condition.

In the schools of two teachers or more a janitor should be employed by the school board. A janitor's duties should include more than building fires and sweeping floors. They should embrace some knowledge of floor dressings and how to apply them, the use of sweeping compounds, the use of disinfectants, methods of ventilation and cleanliness of floors, desks, walls and toilets. In many one-teacher schools the teacher must, through necessity, act as janitor. When this is the case she should be paid for this extra duty and the school board should see that she be given proper instructions relative to the duties required. School room floors should be treated occasionally to a standard floor dressing, a sweeping compound should be used, and dusting done by means of an oiled or damp cloth.

In order to complete the plant herein described, it is necessary that it be equipped with the proper tools for instruction. These include sufficient blackboard space, maps, and globes, textbooks, supplementary reference books covering all subjects of the curriculum and an abundance of illustrative reference material.

Such a school plant, as has just been discussed, could put into operation a course of study that would serve the needs of an agricultural commonwealth. It could further provide for the all-year school. Well-trained teachers would be attracted to such a school and could there become real rural life leaders.

Recommendations for improved school plant.—The survey committee believes that the time has come for the State to set up definite standards for the one-teacher schools, of which there will be many, for years to come, in the State. The standards must be high enough to make of the school genuine community schools. To this end the committee recommends State aid (procured through State taxation or legislative appropriation) on the basis of the following standards:

1. That the standard school shall utilize at least five acres of land for grounds and experiment purposes.
2. That every such school shall erect, at community expense, a cottage on the premises for the teacher.
3. That ample facilities be provided for a sanitary water supply.
4. That ample provision be made for the installation of such sanitary toilet and heating facilities as shall be recommended by the State department of education.
5. That the plans and specifications of the schoolhouse and the teacher's cottage, as well as the ground plat and planting scheme, shall be approved by the division of school architecture and sanitation of the State department of education.

Chapter XI.

SCHOOL CONSOLIDATION AND RURAL HIGH SCHOOLS.

If it were possible to reorganize all the small rural schools in South Dakota as strong one-teacher schools of the community type, described in the preceding chapter, there would be little need for consolidated schools. Unfortunately, many school districts are too sparsely settled and are financially unable to maintain such schools. Here consolidation of two or more small schools to form one graded school of two or more rooms is usually the practical thing to do. While school consolidation is resorted to principally to improve rural schools, in this State it should unquestionably be used as a means to assist the many small, struggling village schools, which in reality ought to be classed as " rural," they being mere rural trading centers.

At some risk of repetition, it is said, this great agricultural commonwealth needs schools and educational processes which can reach clear down to the roots of things, strengthening character, teaching the rights of fellow men, loyalty to the Nation, and fear of God; at the same time that they supply young and old people, without distinction, with practical training for successful breadwinning on the land. These requirements are beyond all but the exceptional one-teacher schools, for which there will always be an important place in South Dakota. An important phase of school reorganization will accordingly come through school consolidation.

Brief history of consolidation in the United States.—School consolidation has made little progress in South Dakota, probably because no concerted policy has yet been adopted to encourage this form of school reorganization by means of State aid. The State department of public instruction likewise has not been able to do much to promote interest in consolidation for want of help in the office. There are in the State, at the present time, 32 consolidated schools, some of them consolidations in name only. However, the survey committee has every reason to believe that the people are ready for a change and eager to consolidate their schools if properly directed; but while ready for school consolidation, the State should not be content with anything except the best type of consolidation.

Throughout the country at large consolidation of schools is now accepted as good national policy. About 10,500 consolidated schools have been organized, taking the place of 50,000 one-room schools. But, unfortunately, some of the consolidated schools are little, if any, improvement on the old. In some places rural territory has been joined to industrial towns and the rural children have been offered an education poorly suited to agricultural requirements. In other places the schools are operated in the open country, but utilize courses of study originally planned for city children. Both types are failures. The kind of consolidated school that has succeeded—and there are many thousands of them—is organized either in the open country or in connection with rural-minded village. But in either case the classroom work is organized to meet the actual needs of the children in attendance.

A study of consolidation in South Dakota.—The 32 consolidated schools in this State are mostly village consolidations. Three schools only are located in the open country. Two schools report that they are consolidated in name only, as the consolidation was done for the sole reason of increasing the powers of the board, no new territory being added or other schools included. The initiative in practically every consolidation movement seems to have come from the small villages which have been eager to draw more taxable area to their small village districts. This type of consolidation may or may not be what the rural population requires—depending entirely on how the courses of study are planned, how the school plant is equipped, who the teachers are, etc.

It ought to be stated here that consolidation to be really worth while must be so thoroughly well done that even the patrons farthest removed would have cause to feel that their sacrifice in time and travel is well repaid.

These things must be considered:

Where the consolidated school is centered in a village, it must still remain the school for rural people. To this end provision should be made (*a*) for an abundance of land to be used for gardens and experimentation; (*b*) for a school plant suitable for community center purposes; and (*c*) for teaching subjects required by rural and village population in this particular State.

Recommendations for a future policy.—It is probably well enough that consolidation has not been urged upon the people. The one-room schools of the poorer sort are now about ready to be supplanted by new buildings. This, then, is the opportune time to inaugurate a State-wide policy of reorganization of the one-room schools as modern consolidated schools, or where the latter are impracticable, at least as modern one-teacher schools.

The survey committee recommends:

1. The appointment of a State rural-school supervisor as a member of the elementary school division of the State department of public instruction, who shall devote most of his time to school consolidation.

2. The drafting of a tentative consolidation map of each organized county. The work to be done by the State department of public instruction in conjunction with the county boards of education and the county superintendents.

3. A State policy looking toward establishing: (*a*) Strong one-teacher schools (as discussed in Chapter X) which may later by enlargement of territory become consolidated schools; (*b*) associated or trading center school areas to embrace a central village and a number of outlying schools; (*c*) one county high school of agricultural type in each county in the State, which may, or may not, be one of the central schools of an associated area.

4. Liberal State aid for the erection of the new school plants and for maintenance.

The recommendations explained.—It is important, first of all, to have an expert to direct the work of consolidation who can give his time to it. To illustrate: North Dakota has 447 consolidated schools and South Dakota has 32. The explanation of the startling difference in extent of consolidation in the two Dakotas is simple. North Dakota has had a State rural-school supervisor on the job who has given all his energy to consolidation, and the State has been liberal with State aid for this type of schools. South Dakota has done neither.

It is furthermore highly desirable to plan for State-wide consolidation by platting each county in detail. This would give assurance that all consolidations would be realized systematically, without leaving out small schools here and there.

An ideally organized county would probably have: (1) A number of one-teacher community schools, which should in time, as the population increases, develop into larger open country consolidated schools with two or more teachers; (2) one or more village centers associated with a number of outlying schools similar to the Minnesota associated schools; and (3) one county high school of agricultural type, as outlined below.

The Minnesota plan of association would need little if any modification to meet the requirements of South Dakota. Any rural trading center embraces the central village with its various emporiums of trade and exchange, and all the surrounding country that can conveniently use the village has a clearing house for its agricultural products and as a social center. The schools of such an area, including the central village and outlying rural schools, could then be brought into an association or consolidation for educational purposes. The whole arrangement would be in charge of the county board of education.

A school system such as this fully developed would contemplate for each "association," the central school, with six grades of work in the associated elementary schools and three years of prevocational studies in the junior high school. This would reduce the time for the "tool subjects" in the elementary schools to the right minimum. One central village or town in each county should be designated as the county high school with six years of work in the elementary school and six years in the upper school, divided into a three-year prevocational course, and a three-year vocational course.

The outlying rural schools should have six-year courses. This would give the teacher opportunity to reduce the number of daily recitations now required and give more time to the beginners. All pupils who complete the sixth year in an outlying school would be promoted to the central school to pursue there their studies during the next three years. The graduates from the junior high school in the central village would be entitled to free entrance to the county high school. This course would return the rural youth to the farm in harmony with it, ready and willing to live happy, remunerative lives on the land.

This county plan of organization would assure unity of purpose and effective supervision of all the schools. The principal of each village center working under the direction of the county superintendent would outline and direct the work in the outlying schools, thus "pointing" the children forward to the central school. The county high school should be organized so that its instructors in English, music, agriculture, home economics, and school hygiene might take turns at supervising the work of the schools.

Special State aid should be offered as an inducement to organize the schools thoroughly. The State might well pay one-fourth the cost of the new consolidated school buildings, provided that in no case should it pay more than $2,500, and, in addition, pay a reasonable maintenance grant, all on condition that the school be erected on or utilize not less than 10 acres of land for agricultural purposes, and in other ways maintain the high standards required by the State department of public instruction.

RURAL HIGH SCHOOLS AND CONTINUATION SCHOOLS.

No high-school facilities for the rural population.—The high-school population in the State is 42,655. In 1916 there were enrolled in town and city high schools 8,164 students and in rural high schools and other rural schools doing high-school work, 1,086 students. Of the latter group only about 200 reached the senior year. Certainly some of the town and city high-school students come from country districts—probably about 2,000. But the fact remains that altogether too few rural children are able to attend high school and the few who have such advantage do not always get the kind of instruction required by agricultural people. The situation may be stated thus: (1) The number of rural pupils in high-school attendance is too small to influence the standard of culture and intelligence in country districts to any appreciable extent; and (2) the courses of study pursued in the town and city high schools of the State are not well adapted to attract students from agricultural communities.

No lengthy argument is needed to convince anyone that a larger number of rural youth should attend high school. The strong manhood and womanhood in the country can only be measured in terms of educated leadership. School education must produce this leadership, but the school preparing for it will be of quite a different type from the one-room schools which certainly find difficulty in lifting the generation now in school to the degree of intelligent and practical citizenship desirable in modern agricultural life.

The kind of high school that is needed in South Dakota is the sort that can point the way to contented, remunerative agricultural life. When fully organized it will extend its educational facilities to young and old people alike. In this State the school should have the following definite aim and scope: Instruct upper-grade children from the entire county in day courses; instruct youth beyond ordinary school age as well as adults in short courses and extension courses; and instruct illiterates in night-school classes.

A distinctive type of rural high school.—The proposed county high schools ought to be distinctly rural, or they should at least offer the kind of subject matter needed by agricultural people. Many persons, and farmers among them, have the false idea that to differentiate between city and country people in education matters is really to discriminate against country children. This is absurd. There is fundamentally no more reason why country children should attend town schools than to reverse the order and have city children attend country schools. The important thing is to make the rural high school as broadly cultural as any town high school, but a culture intimately related to present and future problems instead of the traditional things. Most important, the course of study must be rooted to the agricultural community and all that belongs to it.

The environment in which the South Dakota farmer lives is the natural background for his course of study. Agriculture must not be taught, as it so often is, as a patch of the old educational cloth; it must become the warp and woof of a new educational garment. The mother tongue, the social sciences, and the new agricultural sciences will form the nucleus of the study course. And any citizen of the State who has completed the course with credit should be granted admittance to the State college or to the university with full standing, even though he may not have had the language requirements and certain other subjects now required, which have no place in the proposed rural school courses.

Suggestive steps in county school reorganization.—It is not the purpose nor the province of the survey committee to suggest, in detail, the courses of study to be used in the proposed county plan of schools. It will suffice to suggest the desired steps in the organization of the schools, by enlarging upon the outline given earlier in the present chapter.

1. The small one-teacher school: A six-year study plan, devoted chiefly to the "tool subjects" and general culture; but the entire course rooted to the rural environment, through nature study, school gardening, home projects, and general industrial work.

2. The complete one-teacher community school or consolidated school: (*a*) A six-year elementary school plan and one, two, or three year prevocational study courses, according to equipment and teaching force; (*b*) the work in the first six years similar to that in the small one-teacher school. The exceptional teacher in the complete one-teacher school to be permitted to do two years' prevocational work in addition to the six year "tool subjects," provided he has the assistance of a capable wife who can take the sewing, cooking, and other phases of home economics. The consolidated school to offer the six-year elementary and three-year prevocational course if it has three or more teachers, one of whom should be an adept in industrial work.

3. The central village in the "school association." Nine years. Six years elementary and three years prevocational high-school work. In exceptional cases the school to extend the course, contingent on equipment and teaching force.

4. The county high school: (*a*) Six years above the elementary school—three-year junior high school and three-year senior high school: (*b*) the senior high-school course to contain the following studies:[1]

FIRST YEAR.

First semester.	Class.	Lab.	*Second semester.*	Class.	Lab.
English	5	..	English	5	..
Farm arithmetic	5	..	Farm arithmetic	5	..
Physical geography	5	2	Poultry	1	3
Plant life	3	..	Plant culture	2	2
Mechanical drawing	2	..	Mechanical drawing	..	2
Farm shopwork	..	3	Farm shopwork	..	3
			Gardening	..	2
	25 periods.			25 periods.	

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[1] This course is outlined for boys only. The work would be quite similar for girls, except that home economics would supplant the purely "masculine" subjects.

SECOND YEAR.

	Class.	Lab.		Class.	Lab.
English	5	..	English	5	..
Mathematics (chiefly mensuration and simple phases of surveying)	5	..	Mathematics	5	..
History and government	4	..	History and government	3	1
Farm animals	2	2	Dairying	2	2
Hygiene and sanitation	3	..	Hygiene and sanitation	2	1
Chemistry	3	1	Chemistry	1	2
			Farm work	..	1
	25 periods.			25 periods.	

THIRD YEAR.

	Class.	Lab.		Class.	Lab.
English	5	..	English	5	..
Physics	3	..	Physics	2	1
Farm crops	2	2	Farm crops	2	2
Feeds and feeding	2	2	Feeds and feeding	2	2
Soils and fertilizers	2	2	Soils and fertilizers	1	3
Farm machinery	1	1	Rural sociology	3	..
Rural economics	3	..	Farm work	..	2
	25 periods.			25 periods.	

Continuation school courses needed.—Two classes of people can be reached by the proposed county high school in addition to the regular students: (1) Young men and women beyond ordinary school age who are obliged to work for a livelihood whose education has been so meager as to handicap them in the struggle for a living; (2) farmers and their wives who are in need of inspiration and practical assistance in their daily work.

South Dakota has many farm youths who, for economic reasons, can not attend high school regularly. The question arises, Shall school facilities be placed within reach of these young men and women, or shall they go untaught? Either the State must establish practical continuation courses or the agricultural sections will fail to reach the maximum of efficiency to which they are capable.

The rural continuation course should form an important part of the work of the county high schools. It can best be organized as short courses for people regularly beyond school age. There should be no maximum age limit. Any person who can profit by the work should be welcome to enroll.

The time chosen should suit the farmers. The courses ought to begin early in November when the fall work is done and should continue for four months or more. To accommodate the farmers who drive to school the hours could be set from 10 a. m. to 3 p. m. For others who live too far from home, or are unattached, residence privileges could be granted at the school.

The daily routine of the short courses would include a general brushing up in the elementary subjects. farm arithmetic and accounts, farm law, special phases of agriculture, blacksmithing, cement work, leather work, farm machinery, carpentry, cooking, sewing, home sanitation, and other subjects of value to rural people.

The county high schools, to do the best kind of work, should have a liberal amount of land—40 acres is not too much. The school should have dormitory and boarding facilities for a group of students, who could pay their way in farm work. The principal, a man with thorough pedagogical and agricultural training, should live at the school. There should be farm buildings, farm machinery, and a gradual stocking with farm animals suited to the agriculture of the particular district.

It should be clear that the county high school would be a feeder for the State agricultural college, and would in no sense take the place of the higher agricultural school, as has been true in some States where regional and congressional district schools are set up.

Recommendations.—The committee recommends:

1. The gradual development of the county plan of school reorganization outlined in this chapter, including provision for the establishment of one county high school of agricultural type in each organized county.

2. The grant of State aid to all such schools, to be raised by State taxation or through legislative appropriation. (See Chapters IX and XVI.)

Chapter XII.

THE COURSE OF STUDY FOR OPEN COUNTRY AND VILLAGE SCHOOLS.

Requirements of the law.—The course of study in use in the rural and village elementary schools of South Dakota has been revised lately by a committee appointed by the State superintendent and approved by the State teachers' association. The subjects to be taught are designated by law and are as follows: Reading, writing, orthography, geography, language, and English grammar, history of the United States and South Dakota, physiology and hygiene with special emphasis upon alcoholic drinks and narcotics, civil government, drawing, music, agriculture, and moral and humane instruction. In addition the electors of the district at their annual meeting may add to the above list of subjects.

General plan.—The course of study contains an introduction and a separate discussion for each subject. The most important feature of the introduction is an explanation of the plan of alternation by grades and a specified statement as to just what grades in each subject are to be combined and in just what years the seventh and eighth grades are to be alternated. This definiteness in time allotment, on the part of the makers of the course of study, is to be commended. The observers in the rural schools found the suggestions on alternation of grades to be very generally complied with in the eight counties of the State inspected. Answers from 500 questionnaires of rural teachers, scattered throughout the State, indicated that in 66 per cent of the schools classes were alternated and that they were combined in 81 per cent of the schools.

Combination of classes, alternation of grades and classes, and correlation of subject matter are the only means whereby the recitations in a rural school may be sufficiently reduced in order that the class periods may be of reasonable length.

In spite of the fact that so large a per cent of teachers reported classes alternated and combined, the number of daily classes based on reports from 479 rural teachers showed the median number of daily recitations to be 26.65. The following groupings on reports from these 479 rural teachers indicate that 74 per cent of the teachers conducted from 21 to 30 classes a day:

Classes conducted per day.

	15 or less.	16 to 20.	21 to 25.	26 to 30.	31 or more.
Number	4	44	168	181	82
Per cent	0.008	7.00	35.00	39.00	18.00

Median 26.65 recitations per day.

Observation in the schools showed that this large number of classes was due, mainly, to irregular attendance and to the fact that beginning pupils did not enter schools at stated times throughout the term.

The general plan for the discussion of separate subjects is as follows: A few general statements or a paragraph or more related to the importance of the subject in the curriculum, and a definite outline of the work to be covered for the eighth grades. In the outline of subject matter by grades there appears from time to time a few scattered suggestions on methods and devices, sources of illustrated matter, and list of reference books.

General characteristics.—The subject content of each study is outlined in accordance with the traditional arrangement of the customary textbook. The scheme follows the plan of development of small topics and isolated facts, rather than the grouping of subject matter about central units or large topics.

There is a tendency to get away from this traditional order in the outline in physiology and language. In fact, the makers of the course of study of South Dakota have a vision of the time when the many subjects of our school curriculum will be combined under large central topics. The following is quoted from page 180 of the course of study:

> The next revision of the course of study for the elementary schools of South Dakota will doubtless be an outline in which the work of the grades will be offered in four or five units, each made up of related subjects, the whole including the branches now commonly found in such courses of study; for example, history will include geography, which is one of the factors that determine what the history of nations is to be, as well as civics, which is but a specialized form of history. If such plan is worked out in our next course, language will be a part of the unit denoted English, which will also include reading, grammar, spelling, and possibly writing. In such a course the work in language would be the medium that welds the whole course into a unit.

An illustration from the general topics assigned in the first three grades in history will show how these topics might have been a part of a large central unit. The three topics referred to for the first three grades are Indian life, celebrations and myths, and hero stories.

The makers of the course of study emphasized the fact that these topics were not arranged according to years, but that the teacher should be free to select from them such subjects as she could use. History in the early grades should .be a combination of history, civics, and social activities. The three general topics cited above are isolated and lack a central thread. Before studying Indian life it would be better to prepare the pupils by emphasizing the activities of their own environment through a study of shelter, food, clothing, and community activities. Celebrations form a very vital part of the latter. By a study of his own life there has been developed a background for an understanding of the life of the tree dwellers, cave men, and other prehistoric people. Naturally, a study of Indian and Eskimo life will follow. The myths and hero stories selected would be in keeping with the central theme, which should be the study of the activities of the child's environment as a basis for a study of man's activities in the past. All of this historical subject matter of the early grades should, of course, be developed through constructive work, dramatization, song, and story.

Throughout the course of study suggestions are used that mean little to the average teacher. Under the suggestions for art, teachers are told to correlate the work with the subject matter of the course, and yet there are but few definite suggestions as to how it can be correlated with other subjects. Again, under the geography suggestions it is recommended that nature study correlated with language and reading will be all the geography needed in the early grades. Yet there are but few definite suggestions as to just where and how nature study may be correlated with language and reading. In fact, the course of study does not contain an outline on nature study. The term "motivate" is frequently used in a manner similar to that of "correlate."

From the preparation and experience of South Dakota teachers, as given in Chapter XVIII of this report, it is evident that teachers with such meager training could have but little notion of such terms as "correlation" and "motivation." Again, granted they do understand the meaning of the terms, merely stating what should be done would be of little value. The observers found that there was a lack of reference books and other source material in the schools. A teacher with from four to six subjects per day to teach, which are scattered over an equal number of grades, has little time for the necessary research involved in formulating elaborate lesson plans. Even the best-prepared teachers are inclined to follow the textbooks as the line of least resistance. For this reason the course of study should be very specific in its generalizations.

The course of study has emphasized the elimination of much material found in the textbook, now conceded to be of little value to the child in fitting him for adjustment for the social life of which he has a part. These eliminations are especially noted in physiology and hygiene, arithmetic and language. The minimum and supplementary outlines for seventh and eighth grades history, geography, and language are an excellent feature. The minimum length of school term for South Dakota is seven months. Answers from the 3,923 rural teachers show that 70 per cent of the school terms were less than nine months during the year 1917–18. This being the case, it is very essential that the course of study should present minimum and maximum outlines of work in all subjects.

The further discussion of the course of study will be narrowed down to a summarization of the individual subjects outlined in the course.

Reading.—The term "Reading and Literature" better expresses the subject matter as outlined in the course of study for the eight grades. The subject is introduced by a few paragraphs upon the importance of reading. It is emphasized that the chief aim in the work of reading is to make good silent readers. The paragraphs on aims of reading are followed by a brief discussion of the various methods of teaching primary reading.

Then comes the outline for the work of the individual grades. The subject content of the first three grades is confined to primers, first, second, and third grade readers. Reports from 390 rural teachers scattered throughout the State indicate that 43 per cent of the number of teachers reporting did not have any supplementary reading matter. The answer on this question from the 390 teachers is given below:

Number supplementary readers.	Number.	Per cent.
None	165	43
1 to 2 sets	132	33
2 to 4 sets	48	12
More than 4	45	12
Total	390	100

From the fourth grade on, the course of study very wisely suggests that the business of the subject from now on is reading to learn rather than learning to read. There are suggested lists of stories and poems to be studied. The seventh and eighth grades are encouraged to read current magazines and literary classics. The list of poems and stories to be studied throughout the course is to be commended. Dramatization is emphasized in the early grades, but practically nothing is said of story-telling. Listening to a story told by another affords a valuable training for concentration of thought; the oral reproduction of it gives an ability to think on one's feet, and when the story is read by the pupil himself the retelling is a test of his ability to gather and impart thought from the printed page.

The hints on how to produce good reading are valuable. Models are presented for the mode of procedure in conducting a primary lesson, for dramatizing the story, in interpretative questions, in teaching a poem, in studying a masterpiece, and in the treatment of the life of an author. It would have been wiser, in the dramatization of "Daffy-Down-Dilly," to have emphasized the fact that the selection of characters, the stage setting, and. gesticulation be worked out by the pupils themselves rather than be determined upon by the teacher. Lowell's "Longing," which represents the grief of a parent over the death of a child, can not be comprehended by pupils in the fifth and sixth grades, and is not a wise selection.

The suggestion that masterpieces be first read through for general meaning and purpose is a very good one. The tendency has been in studying classics to dissect them for choice of words and sentence structure, so that the pupils failed to see the story as a connected whole.

Domestic science and gardening.—The suggestions on gardening belong to agriculture and should be included under that head. In the introduction the statement is made that the course is to be correlated with hygiene, yet there are no definite directions as to how and where there might be such correlation. All the work included under canning and preservation of foods and cookery could well be included under the subject of food in the hygiene course.

The course of study suggests that emphasis in domestic science be placed upon sanitation and health. Very definite suggestions as to just how this can be done should be stated in the course of study. Since the hot lunch is so essential to the physical well-being of pupils in the rural schools, and since it forms such a practical feature of domestic science, very definite directions should be given covering the equipment, menus, and serving.

The course of study suggests that instruction in canning be conducted as a home project. The same suggestion is also offered relative to gardening. This might well be recommended for sewing and much connected with the preparation of the hot lunch. In the rural school the home projects of boys' and girls' clubs fostered by the State agricultural extension department should be made a very vital part of the course in agriculture and domestic science.

Agriculture.—In the introductory paragraphs to the subject, attention is called to the fact that no attempt was made to prepare a complete course in agriculture. What was attempted was the formation of an outline on special topics in agriculture, such as weeds, corn, horses, etc. These topics are assigned to months. These outlines do more than mention topics. They give considerable information on the subject matter. A few references are given at the close of each outline. In these lists frequent use is made of publications from the United States Department of Agriculture and the Experimental Station at Brookings.

There should be in every course of study for rural schools a very full outline on nature study for the lower grades. This nature-study outline should embrace topics contained in the subject matter for all the studies belonging to the science group of the elementary schools which are elementary enough to be taught young children. For advanced grades this nature-study outline should be replaced by a definite outline in agriculture. Definite and adequate instruction in nature study in the lower grades is a necessary foundation for a proper understanding of agriculture.

Bulletins from the United States Department of Agriculture and the State experimental stations should not only be present but should be catalogued, in order that their location may be easy. Children need to be taught how to use these bulletins. Not all material in them is within range of the child's comprehension. To this end teachers need to be most careful in selecting references from them.

The project work in connection with boys' and girls' clubs should be connected with the course in agriculture.

Music and art.—The outline on art is concerned mainly with the fine arts, and is planned with a viewpoint of a school where all grades are represented and where there can be but one period devoted to the subject. There is only a brief allusion to industrial art. Since this is the only space given in the course of study to industrial art, it would have been of practical value to have elaborated much more fully on this side of the subject. In a course of study for schools where several grades are to be in the hands of one teacher, the outline for primary grades could well be covered under the term of the industrial art, leaving the fine arts for later grades.

The music outline is brief and is prepared for schools where there can be only a few minutes a day devoted to the subject. In general it may be said that the music outline attempts more than the teacher's preparation allows her to undertake.

Music and art can not be handled efficiently unless under the supervision of a special teacher. Since the music machines are so popular, the course of study could well give suggestions relative to the educative use of these machines in schools and the type of records to be purchased.

Handwriting.—No outline is incorporated. This omission is explained by the following, quoted from page 56, course of study:

> In view of the fact that the various writing systems adopted for use are explicit as to gradation and corresponding method to be employed, only a very few suggestions will be incorporated herein.

If a definite outline is to be omitted it would be wise to designate one or more standard systems. To leave it to whatever chance methods are adopted is dangerous.

The outline should contain some information on standards in measuring handwriting, and indicate where published measuring tests may be obtained.

Spelling.—The excellent feature of the spelling is that it tends away from stereotyped exercises of the traditional spelling book and emphasizes that only words likely to be written should be learned to spell, that the word should be selected from the pupil's immediate environment and that there be constant watchfulness of the pupil's own spelling through individual lists.

History and civics.—The outline for primary grades has been used in this discussion as an example of how isolated topics might be grouped about a large central topic. A list of topics is assigned for the fourth and fifth grades, which are to be approached through the medium of biographies and stories. South Dakota history is given a place in the last half of the sixth grade. The outlines contain a full list of reference books to supplement the work of the individual grades.

In order to approach United States history effectively in the grammar grades it is necessary that some time be devoted to a few large topics which deal with the great European civilization out of which America has developed. These could well be placed in the intermediate grades. The outlines for seventh and eight grades follow the chronological order of the textbook. The minimum course is to be commended, as it provides an adequate covering of the ground for the short-term schools. It is unfortunate that no list of reference books is given for the grammar schools. For effective teaching of history in grammar grades there should be an abundance of outside material. In fact this should be the main source of content matter, the textbook serving as a reference work and the place in which to study perspective. The course of study should be very explicit as to how the supplementary material is to be used.

The leading criticism of the history outline is that small topics and mere historical facts serve as the center of ideas rather than large units. Much more emphasis should be given to local history. Many historical stories form suitable material for dramatization in the lower grades, such events as the adoption of the Declaration of Independence, and the Constitutional Convention, may be effectively reproduced in the higher grades. Indian lore associated with the early history of South Dakota contains situations desirable for reproduction. Every neighborhood has, in its own history, elements that form the nucleus for pageantry. The course of study should stimulate activity in this direction, showing how the pupils, with the teacher as a leader, may work out these dramatizations.

Civics is allotted from one-half to two-fifths of the history time in the grammar grades. The outline covers local, State, and national civics and follows the order of topics found in the average textbook. The danger in following such an outline is that the subject may be treated too abstractly. Civics to be real to children of the grammar grades must be full of concrete illustrations. It is suggested that civics in the lower grades be correlated with the other subjects. This means nothing to the average teacher, for she does not know how to go about the situation. There should be definite directions showing how to correlate the laws of sanitation, quarantine, and disease with the hygiene courses. The game laws very naturally belong to humane instruction. A study of the forest reserves falls under the subject of geography. Community activities, improvement associations, and clubs of various sorts are a part of history.

Physiology and hygiene.—The excellent feature of this outline is that it emphasizes hygiene rather than physiology. Much that is given could well be placed under nature study and domestic science, organized around problems that have to do with the pupil's interest. The outline for grammar grades is supplemented by habit, germ, and community hygiene, quoted from a recent bulletin issued by the State department of Nebraska. All that is given in the hygiene outline could have been classified under larger topics.

Geography.—No definite outline is given before the fourth grade. It is suggested that the work given before that time be centered about nature study. Frequent illustrations to correlation of subjects with nature study are given throughout the outline, yet, as has been stated, there is no course for nature study. The outline for intermediate and grammar grades follows the traditional geography text, in that it emphasizes small facts and topics.

A well-selected list of reference books is given. This should be supplemented by avenues of source material, which vitalize good teaching. Chambers of commerce in large cities and advertising material of railroad and manufacturing concerns are examples of such avenues.

It is not enough to give list of reference books and material. There should be many suggestions as to how and where to use this outside material. In geography as in history teaching. this outside material and not the textbook should form the principal source of such matter.

Arithmetic.—The introductory paragraph contains suggestions showing how the first year's work in arithmetic should be associated with other subjects and with all the activities of the school. The subject matter is then outlined very carefully, month by month, for all the grades.

The selection of topics is confined to the generally accepted notion of what constitutes practical subject matter in arithmetic. It especially emphasizes topics to be eliminated. Emphasis is placed on thoroughness, the mastery of fundamental facts and the illumination of abstraction by concrete examples. The outline does not show how arithmetic processes in other subjects may be utilized. More emphasis should be placed upon the ability to size up mathematical situations rather than learning facts and processes.

The outline in the lower grades is interspersed with a few suggestive devices. There should be more suggested games and a list of reference books covering the teaching of arithmetic for all the grades.

Language.—The introduction to the subject emphasizes the correlation of languages with the other subjects of the curriculum. The outline is then given covering the work for each year. In the primary and intermediate grades the work consists of oral and written compositions, picture study, dramatization, memory work, and letter writing. Just what mechanics of language should be taught in each grade is outlined. The delightful thing about the entire course is that technical grammar is everywhere subordinated to composition. Formal grammar is not studied until the seventh and eighth grades. A minimum and supplementary course is offered for these grades. A very complete list of stories and poems for all the grades of the school accompanies the outline.

Recommendations.—The survey committee recommends that the following outline be followed in preparing the next course of study:

1. Subject matter—

(*a*) Grouped about large topics rather than individual topics. The science group to include nature study, geography, physiology, agriculture, home economics and manual training; the history group, history, civics, and some portions of geography; and the literature group, reading, spelling, penmanship, language, grammar, and literature. Mathematics to be in a group by itself as a necessary measure for all the groups.

(*b*) Such a selection of topics within these large units as will be fundamentally important and large in detail.

(*c*) A progressive arrangement of topics.

(*d*) Suggestions to guide the teachers in the adaptation of subject matter to environment.

2. Time allotment—

(*a*) Suggestions for reduction of classes.

(*b*) Several daily programs to fit schools with one or two teachers and from three to eight grades.

3. Material—

(*a*) List of material and names and addresses of firms where such material can be purchased.

(*b*) A well chosen bibliography relating to subject matter. Name and addresses of publishers and price lists.

(*c*) Suggestions for collection of local material.

4. Method—

(*a*) The approach of subject matter through such problems or projects as will furnish proper motivations.

(*b*) Many more suggestions on helpful methods and devices.

(*c*) More lesson plans.

The level of general culture.—The splendid ideals and cultural inheritance of the South Dakotans are responsible for the justifiable demand for a large element of cultural education in all the schools. This can not be overemphasized in these times of materialistic tendencies. While the survey emphasizes agriculture for an agricultural people, it realizes fully that no agricultural population can become really great which neglects the spiritual elements of an education. As will appear in later chapters, the South Dakota people are probably suffering as much to-day for the want of a high level of general culture as they do for the want of technical and practical instruction in agriculture—nor does South Dakota differ much in these respects from other States.

The elementary and secondary schools should be enabled to give a more thoroughgoing instruction in the fundamental elements of an education than most of the schools are now giving. Music and art, literature and language, must continue to hold prominent place in the work of the university and the denominational colleges of the State. At the same time natural and social science and the other subjects that provide scientific knowledge and trained skill must have a proportionally larger place in the schools than heretofore.

Economy and efficiency in school organization and in courses of instruction.—Real economy and efficiency require that the small rural schools be reorganized, so far as practicable, as consolidated community schools. The schools in the rural villages should for similar reasons plan a wholehearted cooperation with the outlying agricultural districts which are utilizing these villages as trading centers. This can best be accomplished by providing courses of study and means of instruction suited to the everyday needs of both rural and village children. Rural high schools are urgently needed—schools organized to meet the requirements of a modern agricultural people. It is equally true that the town high schools should, at an early date, readjust their work to meet more fully the requirements of their South Dakota environment.

The higher educational institutions were organized in the days of early settlement on the borders of the State—chiefly as the result of local demand. A forward-looking State policy in education would carry with it some definite modifications in the prevailing system. It is doubtless unwise in a State like South Dakota, which, as was shown above, requires a comparatively small number of persons to fill the professions other than teaching and the ministry, to maintain, as it now does, in more than one institution, departments or courses intended to prepare students for any one of these professions. This seems notably true of the various forms of professional engineering, for which schools or courses are now maintained in three higher educational institutions. The question of necessary and unnecessary duplication of schools and courses, will, however, be discussed in detail later. Throughout the study it has been the purpose to keep in mind a State-wide policy of education, to give the commonwealth a type of instruction and study courses dictated by State requirements, fully efficient and economical without being cheap.

Important task of the normal schools and other teacher-training institutions.—The predominance of agricultural life indicates the need for teachers prepared specifically for teaching in rural schools, who can give school children instruction leading to successful agricultural pursuits. South Dakota needs more than three times as many rural teachers as city teachers. This shows clearly what an important task the normal schools, the agricultural college, and other institutions training rural teachers have in this field. The future teachers must have an academic and professional training suited to rural needs and ample to educate the men and women who, in their turn, will furnish the practical aggressiveness, correct outlook on life, and finer idealism spoken of above.

The schools and Americanization of the foreign born.—The world war has opened the eye of the American public to many unwise practices of long standing on the Americanization of alien immigrants. It has been brought home to the people rather harshly that many of the foreign born who were welcomed to American shores and given all the rights and privileges of the native born have never become fully assimilated as American citizens. Lack of foresight of the general public and the Government, failure to enforce ordinary statute law, and neglect to reach the aliens through the right type of education, explain, in some measure, present prevailing conditions. To educate all its people, without exception, is the duty and right of democracy. If the alien has not had these blessings in the country from which he came, it is the duty of the Government to extend the blessings to them now; if they have neglected to make use of the schools organized for them, it is the right of the Government to demand that they correct the deficiency at once. South Dakota has probably ample school law to reach all who have neglected to use the public schools. But the State does not now have the necessary night schools, part-time schools, and other kinds of continuation schools so much needed if the unassimilated adult aliens are to be reached.

Chapter XIII.

HOME ECONOMICS IN THE SCHOOLS OF SOUTH DAKOTA.

Section 1. GENERAL SITUATION.

Introduction.—An American girl is a future citizen of a democracy and, as such, needs the same broad fundamental education that should be provided for every boy. One out of every two girls will be, for a few years, a wage earner for which temporary vocation she may or may not need some special education. Out of every 100 American women, 93 marry. Of these, 87 per cent become mothers and 95 per cent operate their own homes by their own labor. In South Dakota there were listed in the 1915 census 118,110 women employed as housewives; nor did this include all women wage earners who were also home makers. It is evident that a girl's education should include training for citizenship, for home making, and in some cases for wage earning.

Wage earning, which is a permanent occupation for men, is but a temporary vocation for most women. Recognition is now generally given to the need which exists that all girls should receive special training for their life work of home making and motherhood. To afford this training, home economics instruction should be made an essential and required part of every girl's public-school curriculum.

The survey committee is of the opinion (1) that home economics courses should be required for all girls from the fifth to the ninth grades, inclusive; (2) that under certain conditions, where many girls are retarded in their studies, special intensive courses should be offered; (3) that the rural children need this training quite as much as do urban children; (4) that when normal schools accept students from the eighth grade these students should also be required to carry one full year of home economics; (5) that it is right to give university women the opportunity to pursue thorough courses in home economics; and (6) that the conditions upon which the State Agricultural College is founded obligates that institution to maintain for women courses in home economics, in all respects equal in rank and quality to degree courses offered in agriculture and engineering.

Home economics as now organized in South Dakota public schools.—South Dakota has already made good advancement in teaching home economics in its public schools. Forty-four towns and cities have organized departments of home economics and several consolidated schools have made some effort to introduce certain phases of this subject. Little effort has been made to teach the subject in the one-teacher rural schools, although the State course of study offers suggestions on this subject.

In a few schools home economics is taught in high school only; but the prevailing custom in South Dakota city schools is to introduce either food courses or clothing courses or both in the seventh grade. Five schools report teaching sewing in the fifth grade, and three have sewing in grades below the fifth.

It is customary, in schools giving work in home economics, to require all girls to take this while in the grades and to place home economics on the optional list in the high school.

The size of classes varies from 3 to 38 pupils and in time from 35 minutes once a week in some grades to 90 minutes daily in some high schools. It is common practice to allow only one 45-minute period per week for either cooking or sewing in the elementary grades. Sometimes the two subjects alternate, so that a student sews 45 minutes one week and cooks 45 minutes the alternate week.

Weaknesses in the present system.—The short, infrequent periods now alloted to home economics in the elementary grades is one of the chief weaknesses of the work. It is unfortunate that the work in the high school is usually elective, frequently poorly scheduled, often hampered by the grouping of girls of unequal preparation and by failure in securing cooperation of other departments with that of home economics. These difficulties may be due to indifference or to lack of recognition of the importance of the subject.

Preparation of teachers in home economics.—There were 33 replies to the questionnaire sent to the secondary school teachers of the subject. These teachers were trained at various institutions in the following numbers:

State gricultural College of South Dakota	3
University of South Dakota	5
Stout Institute, Menomonie, Wis	8
Iowa State Agricultural College	2
Kansas State Agricultural College	2
University of Minnesota	2
Milwaukee-Downer College, Milwaukee, Wis	3
Thomas Normal School, Detroit, Mich	2
Valley City Normal, North Dakota	1
University of Iowa	1
St. Lawrence University, New York	1
Columbia University, New York City	1
Yankton College	1
Not designated	1

A study of the record of preparation of home economics teachers for high schools leads to two distinct impressions: (1) That many of them are not graduates of four-year college courses; and (2) that the majority of the teachers have received their training outside of South Dakota, although citizens of South Dakota during their college years.

The first conclusion leads to the belief that home economics will never receive fair consideration from other high school departments until the same degree of collegiate preparation is required for the teacher of the one as for that of the other.

The second conclusion (that many have pursued courses at schools of other States) points to some weakness in the higher educational institutions of South Dakota. It is probable that some of these teachers were residents of other States and came into South Dakota for employment, but there is evidence that many South Dakota young people have not highly valued the training offered in their own State educational institutions.

A further discussion of teacher training in home economics will be found in the chapter relating to the Agricultural College of South Dakota.

Difficulties now existing in the administration of home economics.—The teachers realize the difficulties under which some of them are teaching. This is evidenced by many expressions of their needs in the replies to a questionnaire sent them. The commonest desire is for longer and more frequent home economics' periods in the elementary grades and that the subject shall be required in all high schools.

Many state that they need added equipment and some need better rooms. These are but natural conditions in a young and rapidly growing State, and are deficiencies that should be corrected; but they may be temporary and are not necessarily fundamental.

The lack of adequate educational equipment, reference books, and textbooks can not be so lightly overlooked. The cost of these is comparatively small and the rapid increase in school attendance can not be given as an excuse for either the negligence or the indifference which causes the absence of these minor but important supplies and equipment.

It is not surprising that a teacher giving daily instruction in high school English II, high school English IV, German, botany, physiology, and seventh and eighth grade home economics should be forced to say, "She had read no books since she began teaching." Such a schedule of work is alike unfair to teacher and pupils. It is the most extreme type of waste of human ability and vitality. To prepare adequately five different subjects each evening is too great a requirement to make of any teacher after she has taught five full hours during the day. Such a teacher will wear herself out and break in health or she will look for another position or settle down to do as little as possible under the circumstances. It is a common fault in South Dakota that the home economics teachers have been assigned to too many other subjects.

Advancement while in service.—Not only must a home economics teacher have adequate preparation before employment, but her growth in knowledge and teaching ability should be continuous while in the service. Her growth is dependent upon the extent and variety of her reading, upon her participation in teachers' associations maintained in her city, county, State and Nation, and in her graduate study at summer schools or during periods of leave of absence.

With but few exceptions the home economics teachers are reading some of the most approved educational books. One teacher states that she has not time to read—a fact that is perfectly evident when her daily schedule is studied.

Twenty teachers are reading the American Home Economics Journal; 10 are reading the Literary Digest, while others are readers of the Independent, World's Work, National Geographic Magazine, Review of Reviews, and Educational Review. This speaks well for the intellectual efforts these teachers are making and will lead to increased efficiency.

All but six of these teachers have joined one or more educational associations. Not so many are members of the home economics associations as could be desired, but it is probably partly due to their newness in this line of work.

The home economics teachers of South Dakota are most of them new in their positions and only just out of school, which may explain why few have carried graduate courses.

Present methods in teaching home economics.—At present almost all food instruction in South Dakota consists of small recipe cooking, the products of which are immediately eaten. A child is not critical of the result of her own labor, nor is she a fair judge of the quality of cooked foods. This method of disposal of laboratory products is objectionable. It stimulates greed and selfishness. Food is wasted if eaten when not needed. There is no stimulus to excel because there is no one to know of success or failure. It is undesirable that children eat at odd times and between meals. The repeated use of very small quantities of food materials fails to give the judgment and dexterity needed in the preparation of family-sized quantities.

Some notable exceptions to this small recipe method were observed. In Aberdeen, Sioux Falls, and Pierre, the students regularly prepare a daily school luncheon, while at Madison and some other places the children bring supplies from home and take the finished product for home use. In all cases the cooked food should meet a real need and the children should receive the incentive which comes from the approbation of others.

In a few places in South Dakota "model" sewing is given. Handwork with no machine work often remains in the elementary school course. This is not so much the fault of the teacher as it is of the school board which fails to supply sewing machines and suitable rooms for teaching valuable courses in garment making. The use of the sewing machine and the commercial pattern should be taught in the sixth, and each succeeding grade.

To teach neat and effective hand and machine work and also the intelligent choice and preparation of food is desirable, but foods and clothing do not include all of home economics. Almost without exception the school boards and instructors in home economics in South Dakota have overlooked the importance of teaching household accounting, home management, home administration, home nursing, and household sanitation. They have ignored the need of careful instruction in personal hygiene. Yet much of home economics is but an intensified study of hygiene. Each course given, be it food, clothing, or home administration, must be based upon certain elemental truths, and must be taught with especial emphasis upon the health aspects of the subject.

Courses of study.—South Dakota devotes six pages of the elementary school course of study to "Domestic science and gardening," but three pages of the six give a mere exposition of home economics subject matter, and as a part of the course of study could be condensed into one quarter page. So far as could be discovered no teacher of elementary grade home economics in cities or towns was following this course, which is denominated "A practical rural school course." No other course is suggested for the use of teachers in elementary grades.

There is no uniform course in home economics for high schools. At present each teacher plans her own course, which under such conditions varies from year to year with the changing of teachers.

Suggested modification and improvements in the organization and administration of home economics.—South Dakota should have a State course of study for home economics in the elementary and secondary schools. This course should progress toward uniform results, but there should be opportunity for adaptation to community and school needs and conditions.

Particular problems should not be required by this course, but definite principles with State-wide application should be presented in orderly and logical sequence.

Such a course when once inaugurated will bring to the service better prepared teachers; it will enable pupils to transfer from one school to another without delay or repetition of work; and it will make possible adjustment of advanced home economics courses in the State institutions of higher education.

Time allowance on home economics.—The following time allowance for home economics is recommended for all graded schools:

Fifth and sixth grades: Forty-five minutes four times each week or one and one-half hour periods twice each week.

Seventh and eighth grades: Seven 45-minute periods. It is desirable that these be given as three periods of one and one-half hours each and one prepared lesson period, or that two entire half days be given to home economics each week.

If the financial condition of a school community is such that home economics can not be maintained in both elementary and high schools, then it should be supported in the grades alone until there are funds sufficient for a complete course. So many children leave school that it is imperative that some training be given early in the course.

One year of home economics should be required of all high-school girls. This should be in the ninth grade and should be so taught as to be equal to one full unit of work. It may consist of six laboratory hours, two class-room hours, and two hours for study, or it may be given as five double periods weekly, with time taken during these for recitations and discussions. Electives in home economics should be offered in the upper three years of high-school work in the larger city schools. It is probable that much better results will be attained in the smaller towns if efforts be made to make the elementary and first high-school year of greater excellence rather than to multiply courses in home economics for advanced classes.

Textbooks.—Textbooks for home economics teaching should be adopted for elementary schools and for high schools. While it may not be possible to find textbooks that exactly meet the needs of all localities or present material in exactly the order desired by each teacher, it must be conceded that a less-than-perfect textbook, supplemented by notes and assigned readings, carries an elementary or high school student farther along any line than will dictated notes and copied material.

Especially is this true in studies of the type for home economics and with young teachers such as now are employed for this subject. Of 33 teachers of home economics reporting as employed in South Dakota, four accepted their present position since January 1, 1918, 17 during 1917, four in 1916, three in 1915, three in 1914 and two in 1913.

No consistent course of instruction can be maintained without standard textbooks when the personnel of the teaching force changes so frequently.

Content of courses.—Fifth grade: Home economics in the fifth grade should consist of lessons in sewing and in housekeeping. In a well-organized school system all children will have had primary manual arts in the first four grades. They will know how to use scissors and other common tools and will have become interested in the work of their hands.

From the first lessons in sewing, there should be presented a definite purpose for every effort they are taught to make. It is at this age that a girl readily learns to crochet, knit, make tatting, and work designs in cross stitch. All sewing during the fifth grade will be by hand. It should be on small problems, that each may be completed before the child becomes weary and discouraged.

Children interested in dolls may be given problems in doll garments, but usually the child of 11 or 12 prefers making something of actual use. Too often the intelligence and ability of a child is underestimated. If given a task worth while she is interested and will learn quickly. The girls should sew for 45 minutes three times each week. Dexterity is developed, and the speediness with which their problems are completed stimulates the student to further effort. There is little to cause wonder that girls failed to enjoy sewing when they had but one lesson in two weeks, and were able to see few results after many weeks of periodical effort.

If possible, the sewing in the fifth grade should be given by a special teacher. There are, occasionally, grade teachers who are deft in the use of the needle and really enjoy teaching sewing, but usually the room teacher is less efficient in this line than in her usual work. There is opportunity to correlate sewing with several other subjects in this grade. The result is an increased interest in each.

The function of sewing instruction in the grades is first to familiarize the child with the tools used and to develop manual dexterity. This, with instruction concerning the growth of cotton and flax, the life of the silkworm, and simple weaving processes, is about all that can be accomplished in the fifth grade.

One-fourth of the time for home economics in the fifth grade should be devoted to housekeeping. Few mothers would choose cooking as the first part of home-making to be taught eleven-year old girls. Rather, the natural method of introducing a child to home making, is to teach her to make a bed, set a table, clear off a table, wash dishes, dust furniture and arrange household articles in an attractive manner. Less judgment is required in the discharge of these duties than in food preparation. The more immediate tangible results appeal to the younger child.

Equipment for teaching home economics will not be considered adequate if there be only tables, sewing machines, commercially made cooking desks and cooking utensils. In order to teach home making by means of bed making, table setting, dusting, etc., it becomes essential that there be a bed to make, a table to set and a room to arrange and. dust.

A small house, an apartment or a teacher's dining room or rest room becomes part of the essential equipment for the satisfactory teaching of home economics.

Sixth grade.—The sixth grade home economics course should consist of sewing and food preparation.

The sewing teacher should review the methods taught in the previous year, making applications to new problems. The introduction to the use of the machine and of the commercial pattern belongs in this second year of sewing.

The problems chosen should again be small enough to be completed in reasonable time. The articles made should be such as the child, or some member of the family or other person can actually use.

In the food preparation class the housekeeping lessons of the fifth grade should be reviewed and ability developed to follow accurately a simple recipe, to combine the ingredients and to regulate the heat in the ordinary processes of cooking.

This cooking should be with small quantities. Because of the inexperience of the child, some poor products and some food waste are inevitable. The small quantities used reduce the waste to the minimum, at the same time making easier for the child the manipulation of the materials and the use of the cooking utensils. The time allowed for food preparation lessons should not be less than 1½ hours. This makes possible the completion of the processes involved in the preparation of any dish, affords time for explanations and inquiries by the teacher, and gives opportunity for nice dish washing and kitchen cleaning, as well as time for orderly serving and eating of the food.

Seventh and eighth grade courses.—Many children leave school without entering the high school. Recognizing this and also that in the early adolescent period girls are more interested in all that relates to household matters than in their earlier years, the seventh and eighth grade home economics should receive especial stress.

The technique of food preparation, garment making, and housekeeping should be perfected and, in addition, a broader comprehension of reasons for processes and the relation of the study of home problems to other subjects should be developed. Food study should be correlated with arithmetic, agriculture, geography, and language. Garment making with geography, arithmetic, language, and drawing.

In all cases the articles produced by these classes should be for actual use and should meet some existing need. Personal adornment should not be the incentive for sewing nor selfish satisfaction the motive for food preparation.

The sewing may be for personal use if the garments are needed. The problems chosen should be such as the community life makes desirable. Not only should garments be made, but their cost in material and time should be computed and the comparison made between the ready-to-wear and the home-made garment.

Elementary home nursing, home sanitation and household accounting should be taught during the seventh and eighth grades. Practical experience in buying should be given so often that an ability to discriminate and judge of foods and fabrics may be developed.

Upon the completion of the eighth grade of school work certain attainments should have been reached by all girls. Besides ordinary scholastic accomplishments they should be able to do certain things for themselves and their homes and should understand the relation of their home to the community.

A girl of fourteen or one having finished the eighth grade should be able to choose and purchase the material for her own plain clothes and to make her own undergarments and wash dresses; she should have developed a pride in the care and repair of her own wardrobe; she should know how to assist in the household and should enjoy having the care of her own room; she should be able to plan a simple meal economically, purchase the foods and cook and serve the same in an expeditious and satisfactory manner.

Cooperation of the mothers with the efforts of the teachers is necessary in order that the pupils may have encouragement at home to practice that which is taught at school. It is doubtful if school credit in home economics can be given for home work. Credit for home work presupposes frequent supervision, and to do this in home economics there is necessarily an intrusion upon the privacy and personal problems of the home. This, no school official has a right to attempt. Uninspected home work with school credit is eminently unfair. The honest mother and daughter will suffer in comparison with those of more elastic consciences, and the daughter of a mother with high standards for workmanship will be at a disadvantage with those whose mothers' ideas of excellence are lax.

High school home economics.—The ninth year at school should complete the required home economics work. After the ninth year there will need to be, in the larger cities, elective courses. The student pursuing a commercial course can not afford more time for home economics training, neither can the girl who has a reasonable expectation of being able to enter a college or university or normal school. The young woman whose future is undetermined, or who will probably remain in her home, may well elect a four years' course in home economics, and for her these elective high school courses may be established.

The ninth grade or last year of required home economics study should be based upon the previous four years of grade work. It should be a survey course equivalent to one full unit course and should be allotted the equivalent of daily double periods. Foods, clothing, hygiene, and home administration should divide the time. Each may be given the equivalent of one-half of one semester of class time with the laboratory periods equally divided between garment making, food preparation, and housekeeping. Local school conditions may well determine whether these subjects shall alternate throughout the week, or occupy all the time of alternate weeks, or be assigned to seasonal periods. In general, it is most desirable to give the practical work in sewing in the first nine weeks of the fall semester and the last nine weeks of the spring semester, thus leaving the 18 mid-year weeks for food preparation. If the teachers in charge of this work are broadly and well trained such a plan works well, but if the teachers are over specialized and can teach only foods or only clothing, then it will be necessary to alternate the classes so that all teachers may be continuously employed.

Laboratory food products should be used in the school lunch room and for teachers' lunches, receptions, dinners, etc.

Supplemental paid help will be needed in any lunch room supplying 50 or more lunches per day.

It is here suggested that the sewing course shall be based upon the assumption that the students know how to do plain hand sewing, use a commercial pattern, and operate a sewing machine and are acquainted with different fabrics and weaves.

There should be a review of handwork, machine work, and commercial pattern use by some simple problem such as the making of a gingham garment for a child.

A further review of the above and also the choice and application of trimming can be given on a problem such as the making of a muslin gown. Since the use of the electric motor for home sewing machines is becoming common, the use of a motor-driven machine should be taught at this time in the course.

An advanced knowledge of color, design, and textiles may be developed by the problem of a serge school dress or the remaking of a woolen dress or skirt.

There should be at least one problem involving cleaning and, if possible, dyeing.

There should be one problem consisting of work for others rather than for self. This might, for the present, well be for the Red Cross, Belgian Relief, Associated Charities, or for local needy children.

One or more general problems necessitating the cooperation of all members of the class should be required. This may be rug making, quilt making, hemming household linen, or making costumes for some school play. Ability to work well with others and happily for others is a characteristic so desirable that no school should fail to develop this in every way possible.

Unless the teaching of home economics functions in the home life of the students it is of little value. A student in clothing should be more suitably clothed with garments kept in better repair than one without this training. The value of courses should be evidenced by more simple, conservative and appropriate garments chosen and worn by the students.

A similar development of taste and judgment should be evidenced in regard to food, house furnishing, and housekeeping.

The mastery of technique results in greater pleasure in accomplishment.

Whether a girl elects business, industrial, or academic courses, she will always need the instruction received in the required home economics courses.

When a business woman, her training will have prepared her to buy suitable clothes and to care for them; to select proper food to maintain her body at a maximum degree of efficiency; and so to control her environment that her surroundings may not imperil her health.

Elective high-school home economics course.—Elective high-school home economics courses should be paralleled by science courses which become required courses for all students electing the home economics. These science courses should be chemistry, physics, biology, and physiology. In addition to these, there should be a required one-year course of advanced art for all students pursuing the elective home economics course.

This elective course may well include advanced dressmaking, advanced foods courses, invalid cooking, lunch room cookery, household sanitation and administration, and the home care of the sick.

The above-suggested courses do not include trade training for women. Many of the industries in which women are employed are evolutions of household employments, but home economics instruction can be considered only as a prevocational training for these wage-earning vocations. A demand for special trade courses in the high school of South Dakota in the near future and the maintenance of such instruction is made possible by the Federal vocational education law.

Home economics in the consolidated rural schools.—Consolidated rural schools need neither less home economics nor home economics of a quality different from that here recommended for the city or town school.

The instruction should be presented from a different point of view. The problems selected should be chosen because applicable to local rural conditions but the fundamental principles underlying homemaking apply alike to city and rural homes.

An illustration in regard to the variation of the instruction in home economics could be illustrated by lessons upon vegetables. In the city questions of purchase and storage in small quantities would precede discussions as to use, while in the rural school questions of home production and storage in large quantities would be considered before questions of use.

Sanitary milk supplies, laws relating to marketing milk, etc., would be taught in towns; but in the country the production of sanitary milk, its care, handling, storage and use would be stressed.

In towns city water systems would be considered, with general water sources and supplies incidentally taught, while in rural communities the source of water for farm homes, the preservation of the purity of same, the storage of household water, and the introduction of water into the house would be especially emphasized.

In town the municipal methods of sewage and waste disposal would be discussed at length, with minor consideration for the household disposal of waste materials.

In the country, where each householder becomes responsible for the sanitary conditions surrounding his home, greater care in teaching sanitation would be necessary.

In the grades from the fifth to the ninth, inclusive, town and country children should receive the same number of hours of instruction, and one group should not have a better course than the other, but all should have their lessons correlated with their life experiences and especially adapted to their environment.

Home economics in the one-teacher rural school.—The girls of the one-teacher school merit as much and as good training in homemaking as do their more fortunate friends who have the opportunity of attending a graded school. It is manifestly impossible for one teacher to teach all grades and all branches with the same emphasis and with the same efficiency as could eight teachers each in charge of but one grade. Hence home economics courses must be modified and adapted to meet the conditions of instruction existing in one-teacher schools.

There are three ways by which the subjects relating to homemaking may be taught: (1) By the school teacher employed in the school; (2) by a special teacher shared by five or more schools; and (3) by certain women in the community. This last arrangement is known as the "Crete plan" because first effectively used at Crete, Nebr.

In certain sections of the United States there is a fourth possibility of the rural girl acquiring special information concerning household arts. Where there is a well-organized "farm bureau" with a special woman in charge of clubs for women and girls much good instruction can be given in sewing, cooking, and food preservation in connection with these clubs. At places the local teachers have been retained during the summer vacation period and employed as subagents in club work, thus continuing the relationship of teacher and child throughout the year.

When the school system of South Dakota is reorganized and all employed teachers are adequately prepared, it will be possible to require that every rural teacher have some home economics training. Until that time the best that can be secured for the rural child taught by the local teacher is conscientious teaching from a good textbook on home economics subjects.

As elsewhere stated home economics includes the study of sanitation, foods, clothing, and household management, as well as other subjects. The theoretical instruction in regard to sanitation and foods is needed equally by boys and girls in rural homes. Instruction in these two subjects should be given in alternate years to the pupils in the seventh and eighth grades, but sanitary practices should be insisted upon at all times. Each day will offer opportunities to stress the right use of foods.

Manual arts in the four lower grades leads naturally to sewing for the girls of the fifth and sixth grades and elementary agriculture for the boys of these grades. A little time spent daily upon these studies or a longer time on Friday afternoon makes steady progress possible.

Home work in these subjects may be required and graded, but must be tested by skill in tasks done at school before school credit can be given. Without the cooperation of the parents of the district it is almost impossible to attain completely satisfactory results from home economics instruction in the one-teacher school.

By dividing the time of a special teacher of home economics between several schools, most effective teaching of both agriculture and home economics is made possible. By this method the special teacher relieves the regular teacher of half of the pupils and enables her to give special instruction to the section remaining with her.

The "Crete" plan of teaching home economics depends for its success upon the cooperation, ability, and good will of the women of the district. Each woman in the school organization agrees to meet a group of the girls at certain times. The girls go to the homes for their instruction. The woman who is an expert bread maker teaches bread making; the expert milk and butter woman teaches that subject; the woman who is most successful with meats or soups or desserts agrees to instruct in her specialty; while those women who are experts in needlework give their services to the neighborhood girls at stated times.

When the county agents, working under the Smith-Lever Act, have time and facilities for the organization and systematic instruction of rural clubs, and when this club work can be progressively maintained for a series of years, much good instruction in certain phases of home economics can be given the rural girls.

The special teacher, the adoption of the Crete plan, and dependence upon club organizations all involve so many different factors that they are the exceptional rather than the usual methods of securing home economics in the one-room school. The means most often effective will be found to be the willing teacher supplied with a good textbook and making full use of the opportunities offered of connecting instruction in foods and sanitation with the daily service of a hot lunch.

The older girls will learn to assume responsibility in the management of the lunch and the procurement of supplies. The girls next in age will learn simple lessons in correct food preparation in cooking the articles needed. The younger girls will learn nice methods of dish washing, and orderly methods in doing the necessary after-lunch work, while all students, both boys and girls, will be taught cleanliness, orderliness, and good manners if the lunch is rightly managed.

A very few minutes given each day to lessons on the lunch will insure all this if the school authorities supply an abundance of good water. Little of value can be taught regarding sanitation in a dirty school house to unwashed and thirsty children.

Many arithmetics now base their lessons on practical problems relating to home life and various industries. Bookkeeping is made interesting by application to home and farm management problems. By correlating language lessons, geography, arithmetic, bookkeeping, and agriculture with the study of the problems of the home, all are made more interesting and of more permanent value. By these means home economics can contribute to the future efficiency and well being of the rural child educated in the one-room school as well as to the graded school children.

School lunches.—The administration of the school lunch is a legitimate part of the duties of the home economics teacher. As elsewhere discussed this lunch is a means of disposing of the food-class products.

During the more bitter cold weather a hot lunch at noon for the elementary children, with a shorter midday recess and an earlier dismissal, would be the most desirable in all town schools. In the early fall and spring there would be little demand for a school lunch, except in high schools, one-teacher rural, and consolidated schools. In these latter the lunch is needed at all seasons of the year.

The noon lunch accomplishes but half of what is possible when it merely provides food. Personal cleanliness, order, good table manners, consideration for others, and intelligent choice of foods may all be taught through the school lunch. The cooperation of principal, room teacher, and home-economics teacher is necessary for the fullest success. The home-economics teacher must not be expected to give full time to class teaching and have the responsibility of the conduct of the lunch added to her labors.

Time allowance must be made for this extra work, and the teacher should be given opportunity to give at least one 20-minute lesson each week in each grade room on the subject of selection of foods, and the effect upon health of incorrect food habits. By these means the school lunch will become educative and can be related to other subjects of the school curriculum.

Home nursing.—Instruction in home nursing in either town, consolidated rural schools, or one-room rural schools is necessary and should be included in all curricula. This teaching is done best by a trained nurse, if such a person is employed by public authorities or local school boards. When the services of a trained nurse can not be secured the home-economics teacher or the classroom teacher should give this instruction, and also lessons in first aid for all students, both boys and girls.

Courses for boys.—All men and boys need a knowledge of the general facts concerning foods. They should know how to select suitable foods when buying at hotels or restaurants; the effect of incorrect or badly prepared foods upon the health of the consumer; and they also need to know much about the sanitary handling and transportation of foods.

The general information suggested can be given in connection with courses in hygiene. The courses in the technique of camp cookery should be offered as electives in the eighth grade and first high-school year, and special out-of-school classes in camp cookery should be provided.

Teachers of home economics in public schools.—Elsewhere in this report the training of teachers of home economics will be considered in detail, and the relation of normal schools, colleges, and the State university to the teachers of home economics will be fully discussed. No high-school teacher of home economics should be employed who has had less than full college or university training. She should have at least a bachelor's degree. If teachers are employed to teach home economics in the elementary grades only, this requisite training should be not less than the equivalent of two years of standard college or university courses. Teachers of home economics for schools of the open country should have in addition to the above-required preparation good courses in general agriculture, and should have actually lived upon a country homestead.

The pay of home-economics teachers should be the same as the pay of other teachers for whom a like amount of preparation is required.

Supervision of home economics.—South Dakota should have attached to her staff of officers connected with the State department of education a supervisor of home economics. This woman should be broadly educated and should have a wide experience in public-school work. If South Dakota can not at present afford to maintain such an officer at the State department of education, then some instructor in home economics at the State agricultural college should be appointed to discharge the duties of State supervisor of home economics, giving not less than one-half of her time to inspecting the work done and advising the teachers in their departmental organization.

This latter arrangement has the advantage of closely linking the college and the State teaching of home economics, and if properly administered will strengthen and broaden the work in both spheres.

Section 2.—HOME ECONOMICS IN THE STATE NORMAL SCHOOLS OF SOUTH DAKOTA.

PRESENT STATUS.

Introduction.—Home economics courses are now offered in all four State normal schools of South Dakota, but in none of these is this work required. Because of other studies which are required and because of the manner of scheduling these courses, only a small proportion of the normal students enroll in home economics. This condition is unfortunate.

Rural school-teachers need a knowledge of foods, clothing, and sanitation for their own well-being. They must choose their food intelligently that they may retain their health while in charge of the schools. They must dress comfortably, healthfully, and attractively while at work. They must select surroundings that are sanitary and safe. Without knowledge of these subjects their value as teachers is materially lessened and not infrequently effective school service is sacrificed because of ill health.

The normal-school graduates teach in rural and elementary schools, where all information possible concerning conditions which affect health is needed in order that the teachers may instruct their pupils and assist the mothers of the community in maintaining good physical conditions among the school children.

For these reasons and others discussed elsewhere in the report, it is regrettable that so few students at the normal schools are able to avail themselves of the excellent courses offered in home economics.

State Normal School at Madison.—At the Madison Normal School the department of home economics is in the basement of the practice-school building. The rooms are well lighted and large. There is an office, a large laboratory, dining room (also used as classroom), a sewing room, and storeroom. While the arrangement is not ideal, and all necessary courses in home economics can not be properly given without some additional space and equipment, the present conditions are good and with relatively small expenditure could be made satisfactory.

Home economics is required for all girls in the practice school from the fifth to the eighth grade, inclusive. It is an elective for all women students in the normal-school course and is now approved for all students in the tenth grade, but owing to the present schedule of classes it is difficult for the students to register in home economics. Only two double periods per week are now assigned to home economics for normal-school students. This is too small an allotment of the time for such an essential subject.

State Normal School at Spearfish.—The department of home economics is housed on the third floor of the main building, in rooms with low ceilings. The equipment is in good condition and is suitable for the use of the older students, but is not well adapted for children the size of those in the practice school, who now utilize these rooms for their cooking and sewing classes. Rooms and equipment should be provided elsewhere for these children, and the courses should be arranged to conform to the recommendations made for elementary and secondary school home economics. At present, cooking and sewing are required in alternate years in the training school, beginning with the fifth grade and continuing through the eighth. Cooking is given in the fifth and seventh grades and sewing in the sixth and eighth.

Students in the normal school are not required to study home economics, though they may elect courses 1 to 8, inclusive. If they so desire, they may elect a full four-year course. The number choosing this longer course is negligible, though the courses are well planned and well taught.

State Normal School at Springfield.—Home economics at the Springfield Normal School is taught under the worst conditions imaginable. The rooms assigned to the use of this department are in a cellar basement. The equipment is inadequate, and sanitary conditions are bad. The rooms are poorly lighted and ventilated. It is not strange that few students were registered for this work. The same teacher is employed in sewing, cooking, and drawing. She is naturally unable to give to any of these subjects the amount of time and care necessary to satisfactory teaching.

The village school of Springfield is used as a practice school for the normal-school students, but as home economics receives so little attention at the normal school, its relation to the practice school is at present of no importance and is unrecognized.

Northern Normal and Industrial School at Aberdeen.—Home economics at the Aberdeen normal school is in high basement rooms, easy of access and adequately equipped for home economics as now administered. Although this is an "industrial" school, no home economics is required. Agriculture is required in many of the school's courses for both men and women, and the question naturally arises why the coordinate subject of home making has not been similarly considered.

The classes in home economics at the Aberdeen normal school are all small. Three times as many students could be accommodated in the rooms now in use if the courses were properly scheduled. Additional space should be granted for home economics classes and extra equipments supplied. This will be discussed in the following pages.

Recommendations for improving home-economics courses, teaching, and equipment in the four normal schools.—Home economics should be required of all women in attendance at the State normal schools. Students entering from eighth-grade elementary schools should be required to carry one full year of work in this subject during the ninth grade, or first year at the normal school. Students entering from higher grades should present credits for high-school work equivalent to the year's course in the normal schools or be required to carry a full course of home economics during their first year of attendance at the normal schools. As hereinbefore stated, these courses are valuable, first, because they equip the student for more healthful and efficient living; second, because they contribute to her preparation for her own ultimate occupation of home making; third, because as a teacher of rural or elementary schools she must be able to guide and direct her pupils to a knowledge of good, sanitary living conditions and the better management of household affairs.

This required course of a year in home economics should include the study of food, sanitation, clothing, and household management. Two hours daily should be scheduled for this. Textbooks should be used, so that there may be the minimum loss of time in note taking and copying. This course is not intended to be a preparation for teaching any phase of home economics. This point should be made plain to students and to patrons of the school. Up to and through the ninth year of school work home economics is a service subject and a legitimate part of every girl's course of study. It is part of her preparation for a healthful and efficient life.

The above recommendations are applicable to all normal schools in the State. The following recommendations apply only to each institution as specifically named:

Recommendations relating to Madison Normal School.—It is not the function of this institution to prepare teachers of home economics for either the elementary or high schools. The eastern part of South Dakota has the agricultural college, an institution which rightly assumes the authority for the preparation of high-school economics' teachers.

The Madison Normal School would render a fine service to the State if it would arrange a course of five double periods per week for all ninth-grade students, in the nature of a survey course, including lessons in foods, clothing, sanitation, and household administration.

This normal school should also require all its students above the ninth grade to take a course in school-lunch management, first-aid work, and simple home nursing. These subjects are especially needed by rural teachers and should be so scheduled that they may be completed before the end of the tenth school year. Courses in these subjects should also be offered in the summer sessions, so that experienced rural teachers may increase their efficiency by pursuing them.

The practice-school home economics should be made to conform to the recommendations made for the organization of the subject in the public school curriculum. The seventh and eighth grade classes should prepare most of the food now served for the noon lunches, and the tenth-grade students should do the marketing for, supervise. preparation of, and direct the service of these noon lunches.

The department is otherwise in a good condition of organization and control. All new bulletin and periodical materials are made available for the use of the students, and a high standard for administration is maintained. To continue and increase this efficiency it is necessary that liberal appropriations be made for the support of home economics in the Madison Normal School.

Home economics in the Spearfish Normal School.—This normal school is the only teacher-training institution in the western half of South Dakota; hence it must serve the needs of most of the teachers of that section of the State. It is accordingly recommended that a course in first aid and home nursing be required in addition to the ninth-grade work suggested for all normal schools and the tenth-grade course in lunch preparation. The school should also be authorized to offer elective courses in home economics for the preparation of elementary and rural home economics teachers. These courses should be of not less than four years' duration.

The practice school should make provision for practice teaching in this subject, and equipment for the elementary pupils should be installed in or near the practice school. Provision for the service of a hot lunch to the children should be made to give the normal-school pupils experience in this work.

Home economics in the Springfield Normal School.—The normal school at Springfield lies in a section of South Dakota well supplied with institutions that give teacher training in home economics; accordingly this department should be considered a "service" department in this normal school, and its courses should be planned for the general education of the students. No elective courses should be maintained; only one year of required home-economics study and one term of special work should be established. These courses are similar to those suggested for the Madison Normal School, discussed elsewhere in this section.

The home-economics department should be removed from its present quarters. It is suggested that for the next few years one of the large, well-lighted rooms of the science hall be placed at the service of the home-economics department, with the understanding that later special rooms be allotted to home economics in the proposed new wing of the main building. If it is found impossible to place the home-economics department in a room of the science building, it is suggested that a convenient dwelling house be rented by the board of regents and that the present equipment, together with needed additional equipment, be established in such rented house.

The existing close connection of art with home economics is most desirable, but at present the proper administration of these interrelated subjects is complicated by the inadequate teaching force. At least one additional teacher should be added to the department.

Home economics in the Aberdeen Normal School.—The course of study at this school is entirely elective and too closely follows that usual college course, planned and organized with no other purpose in view than to bring into the course, at some time, a sample of each type of home economics work. The home economics department at this school has three functions to perform:

1. To prepare young women for efficient living;
2. To prepare teachers of home economics for rural and elementary schools;
3. To provide vocational home economics courses for girls who have no near-by school upon which they can depend to provide this instruction.

The course in the ninth grade, recommended for all of the normal schools, will provide the training for the first. For the proper performance of the second and third functions, the school must establish carefully planned new courses.

The normal school authorities who formulated the normal school courses should bear in mind that a majority of the students in the normal schools will return to rural communities. Home economics courses should be arranged and administered with special stress on the rural phases of the problems presented.

Food production, food storage, food values, and desirable food combinations should not be taught as subjects of minor importance in a course which stresses mere technique. The study of textile fibers, cloth production, the value of ready-made garments, the selection of suitable designs and colors, and the care of clothing are of more importance than the manual skill required for the fabrication and decoration of garments. Rural water supplies, rural disposal of household waste, small heating systems, home lighting plants, and the healthful control of home environment are more valuable to these students than extended lessons on municipal filtration plants and the abatement of city nuisances. Rural people must wait for a physician, and are subject to many accidents requiring first aid. Rural children should be free from infectious diseases because of the ease of isolation. Knowledge of the prevention of disease, first aid, and home nursing are necessary parts of all education for rural life. Hence in building an elective home economics course for the Aberdeen Normal School, these conditions should be kept in mind. The entire curriculum should be designed to prepare the student for satisfactory administration of the rural home.

The present equipment for teaching home economics will continue to be needed. It should be supplemented by a suit of rooms for practical household administration, or by a cottage for that purpose. If a model farmhouse is built on the campus of the normal school, the arrangement would be ideal if this were given as a practice home for the advanced classes of home economics students. Attached to this should be a garden, chicken house and yard, bee stands, and a barn to supplement class work with practical experience.

When a model consolidated rural school is built at this normal school, home economics should receive special attention. This would afford practice teaching for the home economics students and would give experience in management of noon-day lunches.

SUMMARY OF RECOMMENDATIONS.

1. All the normal schools should establish a required course of home economics to be taken during the first year of attendance at the normal school.

2. A special course in hot-lunch management, first aid, and elementary home nursing should be provided and made compulsory for all tenth grade or second year women students in all the normal schools.

3. The Madison and Springfield Normal Schools should not extend their courses beyond the two lines of work above recommended.

4. The Aberdeen and Spearfish Normal Schools should supplement the above-required courses by elective courses for elementary and rural teachers and for prospective home makers.

5. The salaries of home economics teachers should be increased in all the normal schools, and the home economics teaching corps should be enlarged.

6. The home economics department at Springfield should be removed from its present location, which is extremely objectionable, to better quarters.

7. The equipment and rooms at the other schools should be improved and enlarged.

8. Each practice school maintained at the State normal schools should be specially equipped with food and clothing laboratories and with provisions for practice in school lunch management.

Chapter XIV.

INSTRUCTION AND SUPERVISION IN OPEN COUNTRY AND VILLAGE SCHOOLS.

Section 1. INSTRUCTION.

Mode of procedure.—This discussion is based upon careful observation of 238 recitations in 83 rural and village schools visited. Usually, the survey committee was accompanied by the county superintendent. In two counties the Red Cross public health nurse was a third visitor in some of the rural schools inspected. The visitors took inconspicuous seats and there was no deviation from the regular program. In schools where there was to be a talk and inspection by the public health nurse the school program continued through two or more recitations before the nurse began her work. If the road conditions and distances made it possible the survey specialist then moved on to another school.

The physical condition of the room was given consideration. In one school the observations concerning the recitations were not recorded because the room was too cold for comfort. Parts of recitations were also eliminated. Only those lessons listened to under conditions as nearly normal as possible are included in this report.

The grade, subject matter, treatment of lesson by the teacher and the reaction of the pupils were observed. Very full notes were taken, the visitor recording almost verbatim all that was said or done on the part of both pupils and teacher throughout the recitation. For the time being no account was taken of the children at their seats unless they became a disturbing element to the recitation in question.

Physical conditions and equipment.—It is quite necessary to take into consideration the physical conditions under which these lessons were prepared, and something of the equipment with which the teacher and pupils worked. The results of these summarizations are given in the following tables:

TABLE 33.—*Physical conditions in open country and village schools visited.*
(Based upon observations in 48 rooms, in the open country and 80 in the village.)

Items.	Open country.		Villages.	
	Number.	Per cent.	Number.	Per cent.
Clean walls	18	38	23	32
Well chosen and well framed pictures	16	33	35	40
Single seats	23	48	58	65
Some seats ill fitted to pupils	27	56	20	22
Unsatisfactory lighting	38	79	30	38
Heating and ventilating system or furnace	22	46	73	82

TABLE 34.—*Equipment in open country and village schools visited.*

(Based upon observations in 48 rooms in the open country and 89 in the village.)

Items.	Open country.		Villages.	
	Number.	Per cent.	Number.	Per cent.
Satisfactory maps	25	52	....	....
Satisfactory globes	17	35	....	....
Sufficient blackboards	28	58	64	72

A study of the above tables indicates that approximately one-third of the rooms in both town and country schools visited had clean walls and well-chosen and appropriately framed pictures. It was generally noted that the pictures were hung too high. Single seats were found in a little less than half of the rooms in the open country schools and in nearly two-thirds of those in the village schools. More than twice as many children were seated uncomfortably in the rural schools as in the village schools. Unsatisfactory lighting includes cross lighting, front lighting, insufficient lighting, and lack of shades. These bad lighting conditions were found in 79 per cent of the rural schools and in 38 per cent of the village schools. It is noted that heating and ventilating systems or furnaces were found in less than half of the rural schools visited. In rooms heated by stoves the floors were usually cold and the air vitiated.

Summarizing the results of these observations on physical conditions in the schools visited, it was found that on every item, except clean walls, rooms in the villages and towns ranked higher than those in the open-country schools. In this discussion on instruction consideration must be given to the fact that many recitations were listened to in unattractive rooms, that some children were seated uncomfortably and that rooms were common where lighting, heating and ventilating were unsatisfactory.

An examination of Table 34 indicates that over one-half of the rural schools studied had satisfactory maps and that there were satisfactory globes in a little more than one-third of the rooms. Exact data on this subject were not taken for all the rooms inspected in the villages. It was observed that there was a satisfactory set of maps and a globe in practically every town school, so that if there was an inadequate supply in individual rooms it was possible to borrow this equipment when the occasion demanded.

The blackboard space was either insufficient or in unfit condition in 42 per cent of the open country schools and in 28 per cent of the towns visited. Exact observations were not made relative to reference material in these schools. In general it may be said that the observers found a lack of reference books and illustrative material.

Length of recitations.—In the discussion of the course of study it has been stated that the number of daily recitations in open country schools (based upon reports from 479 teachers) was 26.65. The school law of South Dakota defines a school-day as five and one-half hours, exclusive of intermissions. This makes only 12 minutes as the average length of a recitation.

Actual time was kept of the length of the recitations in 62 classes observed in one-teacher schools. The results are grouped below:

Length of recitations

Classes.	4 to 6 minutes.	7 to 9 minutes.	10 to 12 minutes.	13 to 15 minutes.	16 minutes.
Number	15	11	28	4	1
Per cent	24.00	23.00	45.00	.064	.016

Median, 10.21 minutes.

It is not surprising that the recitations should be so short when the number of classes were more than 26. The above grouping shows that 92 per cent of all the recitations were 12 minutes or less; 24 per cent lasted only 4 minutes. The minimum length of time was 4 minutes and the maximum 16 minutes. The median was 10.21 minutes. Of the five recitations 4 minutes in length, four were in spelling and one in first-grade arithmetic. The 16-minute recitation was in reading. The three 15-minute recitations observed were in music, arithmetic, and reading.

Nearly one-half of the recitations, upon which this discussion on instruction is based, were in the open country schools. In judging the type of instruction consideration must be given to the fact that the median length of recitations for approximately one-half of the classes observed was but little over 10 minutes.

Lesson assignments.—The lesson assignments were, in all but a few instances, given very hurriedly at the close of the recitation. Careful notes were taken relative to the assignments of 83 recitations. Their character is indicated below:

TABLE 35.—*Lesson assignments.*

Items.	Number.	Per cent.
Page or lesson simply indicated	55	66
A few details mentioned	17	20
Assignment by pupils	4	5
Carefully prepared assignments	7	9
Total	83	100

These expressions of teachers, taken from the field notes, very clearly characterize the type of assignments in 55 or 66 per cent of these 83 recitations:

"Take to page 155." "Same lesson to-morrow"; "Typhoid fever next time"; "Blackie in the trap, next"; "Learn 'The Last Leaf"; "Begin with Stonewall Jackson and finish the chapter"; "Spell the next list"; "Work all the problems in the next exercise."

The few details given in the 17 lessons consisted of indication of words from the reading text whose meaning was to be looked up in the dictionary; mention of the topics of the lesson; reading of the advance lesson by the teacher; and designation of drawings to accompany the lesson.

In four instances the children were making their own assignments. In three of the cases the reader had been completed and the members of the class were choosing their own selections for review. The visitor noted that considerable interest and rivalry were aroused in determining the selections for the next lesson. In the fourth instance the class resented the length of the teacher's assignment, with the result that the amount the pupils thought they could master was accepted by the teacher.

The lesson assignments were carefully prepared in only seven of the 83 assignments noted. In two of the seven lessons outlines upon the board were copied with instruction that the future lessons follow the routine. Careful instructions were given concerning two lists of sentences to be prepared, and the remaining three cases were arithmetic lessons given to supplement the topic in the textbook.

The significant thing in this study is that carefully planned lessons were observed in only 9 per cent of the 83 recitations. To know how to study is a fine art. Good instruction implies such direction on the part of the teacher, in the preparation of a lesson, as will teach the pupils how to weigh values, and see the lesson in the perspective of their own environment. All this is a part of the lesson assignment. Sometimes it is necessary to expand it to the length of a study lesson that will occupy the time of the entire class period.

Number and grade distribution of recitations observed.—This status of instruction in the rural and village schools of South Dakota is based upon observations of 283 recitations. Tables 36, 37, and 38, which follow, show the subjects in which the recitations were observed and their grade distributions for the open country schools, the village schools, and both open country schools and village schools, respectively.

TABLE 36.—*Recitations and their grade distribution observed in open cou schools.*

Studies.	Grades.								Total.	
	1	2	3	4	5	6	7	8		
Agriculture	......	......	......	......	......	......	......	1	1	
Arithmetic	2	5	4	2	2	1	......	8	19	1
Civics	......	......	......	......	......	......	......	2	2	
Geography	......	......	1	......	......	2	......	1	4	
History	......	......	......	......	2	1	1	3	7	
Language and grammar	......	......	......	1	3	3	1	3	11	
Physiology	......	......	1	1	1	2	......	1	6	
Spelling	......	2	1	2	1	1	1	3	11	
Reading	16	8	13	7	3	3	......	2	52	4
Total	18	15	20	13	12	13	3	19	113	...
Per cent	15.00	14.00	17.00	12.00	10.00	12.00	3.00	17.00	......	10

TABLE 37.—*Recitations and their grade distributions observed in small t schools.*

Studies.	Grades.								Total.	
	1	2	3	4	5	6	7	8		
Agriculture	......	......	......	......	......	......	......	1	1	
Arithmetic	2	2	3	3	1	2	1	4	18	1
Civics	......	......	......	......	......	......	......	4	4	
Geography	......	......	......	4	4	6	1	......	15	1
History	......	......	......	......	1	3	......	4	8	
Language and grammar	......	1	2	2	......	......	4	2	11	1
Physiology	......	......	......	......	2	2	......	6	10	
Spelling	......	2	5	......	2	2	1	1	13	1
Reading	16	11	5	5	5	1	......	1	44	3
Total	18	16	15	14	15	16	7	23	124	...
Per cent	14.00	13.00	12.00	11.00	12.00	13.00	6.00	19.00	......	10

TABLE 38.—*Recitations and their grade distribution observed in open cou and small town schools.*

Studies.	Grades.								Total.	
	1	2	3	4	5	6	7	8		
Agriculture	......	......	......	......	......	......	......	2	2	
Arithmetic	4	7	7	5	3	3	1	7	37	1
Civics	......	......	......	......	......	......	......	6	6	
Geography	......	......	1	4	4	8	1	1	10	
History	......	......	......	......	3	4	1	7	15	
Language and grammar	......	1	2	3	3	3	5	5	22	
Physiology	......	......	1	1	3	4	......	7	16	
Spelling	......	4	6	2	3	3	2	4	24	1
Reading	32	19	18	12	8	4	......	3	96	4
Total	33	31	35	27	27	29	10	42	238	...
Per cent	15.00	13.00	14.00	11.00	11.00	12.00	4.00	20.00	......	10

It will be noted by an examination of Tables 36 and 37 that number of recitations observed were quite evenly divided betw open country and village—113 for the former and 124 for the latt

A study of the tables shows that more recitations for both open-country and village schools were observed in reading than in any other subject. This is explained by the fact that in the early primary grades reading is practically the only subject pursued. Arithmetic classes were second in rank for both the country and town. This is easily explained by the large time allotment to arithmetic in the course of study. The distribution was quite evenly divided among all other subjects listened to with the exception of agriculture.

A further examination of the accompanying tables shows the recitations observed were quite evenly scattered through all of the elementary grades. A few more recitations were observed in the eighth grade for both town and country. The first grade was second in rank. In the rural schools and in the rooms in small towns where several grades were handled it was customary to combine grades. Where this condition was found the observers recorded the recitation as belonging to the highest grade represented. The plan of alternation of grades outlined in the course of study indicates that the eighth-grade work is given in the year 1917–18. This explains the small percentage of classes observed in the seventh grade.

Lessons in domestic science, music, and penmanship are not included in this tabulation for the reason that they could not be recorded as belonging to any one grade. Instruction in these subjects is discussed under the respective heads.

Summarizing the above it may be said that the number of recitations observed was about equal for both the open-country and town schools, that more classes were observed in reading and arithmetic than in any other subjects, and that the distribution for the grades was about equal.

Plan of treatment.—The 238 recitations observed are discussed under the individual subjects. They follow the order given in Tables 36 and 37, with the alphabetical insertion of subjects that concerned the school as a whole. The high-school subjects are dealt with separately.

Agriculture.—There is something significant in the fact that, in a State where the primary occupation is farming, out of a total of 238 recitations there should chance to be only two recitations in agriculture. One of these was listened to in the mining section of the Black Hills. The lesson was merely the reading of an elementary text in agriculture. The teacher explained that she was using it as a supplementary reader. There was one pupil in the class, a girl, who read the text fluently. The lesson was on " Selecting seed corn " and " Weeds." The teacher asked a few questions on each section. The questions were such as stimulated thought on the part of the young girl, and her answers were, in turn, unusually intelligent. When asked if she had learned anything about corn that would apply to her garden she quickly replied, "Nothing; because you can't raise corn here."

This eighth-grade girl did not need to be reading this agriculture text as a supplementary reader. She read fluently and should not have wasted the class time in the mechanics of reading. What was given in the text on "Selecting seed corn" could well have been supplemented by laboratory tests in germination. This lesson was given at a time when the newspapers were full of the alarming conditions arising over a scarcity of seed corn, yet not a word was said of existing conditions.

In the second instance, topics in agriculture formed subjects for composition once a week in the seventh grade grammar. On the day of this observation the subject was "Hogs." Each pupil had selected some one type as a subject. Information had been gleaned from reference books at school and farm newspapers at home. Each pupil had illustrated his composition with a picture of the particular type of hog in question. These pictures were taken from farm papers. At the beginning of the hour the papers were passed about the class and comments were made on their general appearance. Such comments as these were heard: "Good agricultural picture," "Picture not pasted on neatly," "Picture not cut out well," "Paragraphs not indented," "'Jersey' misspelled." A pupil was then sent to the board to write the list of lard and bacon types of hogs. These lists were given by the children, and any misspellings were corrected by them. After the various types were placed upon the board the teacher called upon individual pupils to read their compositions. The following were read: "Poland China," "Duroc Jersey," "Tamworth." At the close of each reading the pupils discussed the features given or brought out points not mentioned. The children kept their papers and handed them in to the teacher after they had made their own corrections.

The most pleasing thing about this lesson was the initiative exhibited by the pupils. All the time the teacher stood in the background. She had directed them how to use information gathered from various sources.

Arithmetic.—Of the 37 arithmetic lessons observed, 25 were drill lessons. These are classified as follows:

Unprepared for subject matter	13
Unnecessary subject matter	8
Reviews	5
Interest keen and varied	4
Total	25

The children were unprepared for the subject matter in 13 of these drill lessons either because the work attempted was beyond their comprehension or because subject matter, dependent upon that upon which they were concerned, had not been mastered. An example of the former was a class of second-grade children attempting examples in multiplication involving a multiplicand extending into the thousands, and a multiplier of two figures. Examples of the latter were found in the primary and intermediate grades, where children were presumably working for skill in the fundamental operations and were handicapped because the 45 combinations and the multiplication tables had not been mastered.

The unnecessary subject matter noted was tedious drills upon Roman numerals. The children were writing these numerals to heights seldom used in daily life. Again, they were changing long lists to their Arabic equivalents, and vice versa. The acquirement of all the information needed upon Roman numerals, by children in primary grades, should be an incidental rather than a fundamental feature of instruction.

There seemed to be no aim or purpose in the five review lessons. The time was consumed in counting or giving a few problems covering each of the fundamental operations. Much that was asked for was that in which the pupils were already proficient.

That the interest was keen and sufficiently varied could be said of only four of the drill lessons. In one instance the class was divided into two teams, the goal being the least possible time that a set of multiplication problems on a chart could be solved. In another case a drill on number combinations was kept alive by means of a guessing game; in a primary class the boys and girls were opponents in a relay counting exercise; and a class in decimals were expressing the decimal read in two ways.

In 11 of the lessons the pupils were solving problems involving principles already learned. In all but two instances these problems were taken from the textbook. The two exceptions were problems dictated by the teacher. Three classes solving problems in denominate numbers were accompanying the solutions with representative drawings. One class was discussing whether the matting for a room would cost less to be laid crosswise than lengthwise. In this instance a chance was lost to discuss the artistic effect in laying the matting. In another instance a distance problem that troubled all the class was reasoned out by means of a drawing made by the teacher from suggestions by pupils. In the remaining six lessons the only aim seemed to be the answer in the book.

Only one class was observed where a new subject was introduced. The subject was plastering, painting, and kalsomining. This lesson opened with a discussion of the rules of business regarding the elimination of doors and windows. The dimensions of the room, in which the pupils were seated, were estimated and the process determined by the class. The problem was then solved by the class.

Instances were common of lack of attention during the recitations. There was seldom blackboard room to accommodate all of the class. Sometimes those at the seats were instructed to do their work on paper. Even when this was done it was difficult to keep them all at work. More often those at the seats were not assigned any tasks while the group at the board were working. All this waste of the recitation time could have been avoided by making definite requirements for those working at the seats.

Since nearly 70 per cent of all the arithmetic lessons were drill lessons, there was not the opportunity afforded to note how much the arithmetic lessons would function in real life. The matting problem and the kalsomining problem did touch the personal experiences of the children; but there were not enough lessons where the application of a principle was involved to draw a conclusion from the teaching observed. This information had to be gleaned by conversation with the teachers and a study of the course of study. It would seem from these sources there was a noticeable lack of appeal to application of arithmetic to the environment of the child. The glaring defect in the instruction was a lack of mastery of the machinery necessary to calculation. This defect came in the primary grades.

Civics.—Five of the six lessons observed were oral and one was written. Two of the five oral lessons were upon departments of the Government, one upon juries, one on the powers of Congress, and one on the plan of nominating President and Vice President. The subject of the written lesson was the duties of the Secretary of State. In every case the textbook was the sole source of subject matter. In one instance the pupils reinforced the lesson topics by current events. This, apparantly, had not been assigned, but it just happened that certain current topics had a bearing upon the subject matter under discussion. In four instances it was difficult to get answers from the pupils on the lesson in hand. In one class of 16 only three pupils took part in the discussion. This was about the ratio of answers from the other lessons observed. In two, of these four lessons, the class was not held wholly to the topic assigned. Questions were asked which wandered far from the subject matter in hand. It may be said that the interest of the children was aroused in these foreign topics. This was because the information was within the range of their comprehension.

To the observer it was clear that no advance plans were made by the teacher for these lessons. There was not the slightest evidence of assignment of outside reading matter, of outlines to be developed by the pupils, or deductions of abstract principles of government from concrete examples. It has been inferred in the discussion of the syllabus, relative to civics, that the danger in following such an outline is that the subject may be treated so abstractly as to be beyond the pupils' comprehension. This defect was clearly demonstrated in the lessons observed.

Geography.—Nineteen lessons were observed. In only one instance was the subject matter handled in such a way that the pupils used their initiative and drew their own conclusions relative to geographical phenomena. In this case the children developed their own definitions of surface features from models they had reproduced in the sand table. In 11 lessons the sole requirement was to be able to reproduce the textbook assignments. In two of these cases a portion of the class time was taken in reading the lesson text. In only three of these 11 recitations did all the children seem interested and able to clearly comprehend the descriptive matter of the text. These exceptions were due to the fact that the teachers in charge were able to state their questions in such a way as to connect the subject matter with knowledge already in possession of the pupil, thus making it possible for the lesson to be intelligently digested.

There were only two instances observed where the subject matter was gained from sources other than the textbook. One was the sand-table lesson, and the other was a story about Turkey read by the teacher from a book of travelogues. The visitor had not listened to the previous lessons where Turkey was discussed, but was present when the story was read and found the children much interested in listening to the reading.

Two lessons were review lessons. In one the questions had been assigned from a list of review questions on geography that was in the hands of the teacher. The other lesson was an aimless review; the questions had not been assigned, and there was no order or sequence in the questions asked.

In two recitations the teacher did not hold to the lesson topic assigned, but wandered into fields far distant from the question in hand. One example was where the lesson assignment was the New England States. The only questions asked on the assignment were the position, boundaries, and names of the New England States. Then the lesson switched to the boundaries of the United States, and before the class hour was ended the discussion had touched Ben Franklin and his lightning rod, the cotton plant, and wool production.

In the table on equipment, given in the early part of this discussion on instruction, it is noted that there were satisfactory maps in 52 per cent and satisfactory globes in 37 per cent of the rural schools visited. In the geography lessons observed, the visitor noted instances where maps and globes were at hand and not used, and where their introduction would have greatly elucidated the topic under discussion. An example was a recitation where the following question was asked: "What part of the United States has the same longitude as Ecuador?" A series of guesses were made and the question left with a wrong answer, yet just above the teacher's desk was a new suspended globe. There was only one recitation where maps were used intelligently. In this a question arose concerning the area of Germany. With the aid of maps, the areas given in the index, and the scale of miles, the pupils determined that it was about equal to that of Texas.

Summarizing the results it was found that a reproduction, on the part of the pupils, of the descriptive part of the text was the way in which geography was taught. There was almost a total lack of appeal to reference books and illustrative material. Maps and globes were not used to their capacity. The tendency was to wander from the topic in hand.

History.—Fifteen recitations were observed. These were all from grades five to eight, inclusive, and were concerned with narrative history. In two lessons the subject matter was approached through an outline submitted by the teacher. While there was no source of subject matter in these two lessons other than the textbook, the children were being trained to intelligently organize the material in the textbook. The remaining 13 lessons were formal, stilted repetitions of what the textbook said. In two instances the children read the lessons, and a few feeble questions were asked by the teacher after each child had read. In two lessons the pupils were not able to answer the questions submitted, and the time was occupied by the teacher in reading the lesson from the text. Only on three occasions was there anything to relieve this monotony. One was when the teacher asked for a comparison between Revolutionary War taxes and the war taxes of the present time, and the other was a supplementary report submitted by a pupil. Once a map was introduced to further clinch the question under discussion.

The same tendency to aimless reviewing was noted here as in the other subjects. Usually the first two or three questions were concerned with a review of the previous lesson, then the questions wandered far away from the topics in hand.

Only 2 of the 15 lessons observed were carefully planned in advance. Outside of these lessons the history teaching consisted of a perfunctory repetition of the material found in the textbook. There was a noticeable lack of reference to material outside of the textbook.

Home economics.—The observers found in their inspection of 82 rural and village schools 8 instances where hot lunches were being served. Four of these were in villages and four in the open country schools. One of the village teachers had three months' preparation in domestic science and taught six daily recitations. Two of the rural teachers had some training in the subject. In only two cases were there separate rooms where the lunches could be prepared, and these rooms were used for other recitations. In the other instance the cooking was done in a cloakroom or the assembly room. In only one place was there running water available. In three schools the water had to be carried by the pupils from a near-by well; in the remainder of the schools the children brought their drinking water from home in bottles or jugs. In such schools melted snow was all the water available for cleaning purposes.

The course of study suggests that special emphasis should be placed upon sanitation. In only three instances where hot lunches were served was there an atmosphere of cleanliness and orderliness. The visitors were present on three occasions where lunches were served, and in none of these instances did the pupils wash their hands either before or after the lunch.

There were 3 schools out of the 82 visited where sewing formed a regular feature of the program. In these schools there was no instruction in cooking. Two were in villages and one in the open country. In one, a consolidated school, the sewing teacher had just been added. The sewing class comprised two sections made up from girls in grades 3 to 10, inclusive. One-half day per week was allotted to the work. The teacher was a graduate of Stout Institute. In the other school 75 minutes per day was given to sewing for girls in the high school only. The visitor was present at this class and had the opportunity to inspect the program for the year. The sewing course was confined to fancy lingerie. This teacher's preparation consisted of a few weeks in a summer school. Quite a large number of the schools in both the country and village were making a beginning in sewing and knitting under the supervision of the Junior Red Cross.

The significant thing in the observation in home economics in these 82 schools inspected was that only 11 schools, or 14 per cent, were giving any instructions whatever in the subject. Answers, on provisions for hot lunches, from 500 teachers scattered throughout the State, indicate that only 79, or 16 per cent, had any provision for serving lunches. Replies from 500 teachers in rural schools scattered throughout the State indicated 185, or 37 per cent, of the teachers giving some instruction in either cooking or sewing or both. This percentage is considerably higher than that noted by the observer. It is highly probable that this difference is due to the fact that Junior Red Cross activities were counted as regular instruction in sewing.

Summarizing the results of observations and replies of teachers it may be said that instruction in home economics in the rural and village schools of South Dakota was limited. It was obvious that there were not the proper facilities for housing.such courses, that the difficulty of obtaining water, the crowded curricula and the untrained teachers made the solution of the problem complex.

Language and grammar.—Twenty-two lessons were observed in language and, grammar. Thirteen of these were in formal grammar and distributed among the grades as follows: Eighth, 6; seventh, 4; and sixth, 3. Six of the language lessons dealt with the mechanics of English and three were concerned with written composition. In 14 of the lessons in formal grammar and the mechanics of English the textbook was the source of the subject matter. The other five lessons were selected by the teacher to supplement the work of the text or the outline submitted by the course of study. One of the composition lessons was based upon a picture study, a second was the reproduction of a scene from Robin Hood, and the third was on fires, the themes being suggested by the lessons outlined in the fire prevention pamphlet issued by the State fire marshal.

The tendency to review was noticeably common. One entire period was spent in an aimless review of the parts of speech, another teacher started a review on the parts of speech and then switched it to the properties of verbs. It was not unusual to use a few minutes at the close of the lesson in review. These reviews were not built about the lesson assigned and were evidently used to fill in the gap of a lesson that was finished too soon. They were clearly an evidence of the lack of a carefully planned lesson.

There were two instances where a subject, new to the class, was introduced. In one case the children approached the new subject matter by being given 25 minutes to study their definitions. In the other instance the mode of procedure was thus: The teacher read a list of masculine nouns and the children were asked to write the opposite gender upon the board. As they proceeded discussion was free about how these words were differentiated. Later the children formed their own definitions for indicating the gender of nouns.

The course of study explicitly states that the seventh and eighth grades are the place for formal grammar, yet out of 22 lessons observed there were three instances of formal grammar in the sixth grade. From observation of the recitations in language and grammar and from conversation with teachers concerning the subject it was apparent that below the sixth grade far more attention was given to the mechanics of language than to story telling, dramatization and oral and written composition. It was very evident that these lessons in language and grammar were not carefully planned.

Manual training.—There was equipment for manual training in five of the schools visited. Four of these schools were in villages and one in the country. Replies from 500 rural teachers, representative of the State, indicated that 67 schools, or 13 per cent, were provided with equipment for instruction in manual training. Difficulty in housing the course, crowded curricula and teachers with but little training in the subject and numerous other branches to teach offered the same complex situation as that found in home economics.

Music.—Of 56 open-country schools visited, 30 had a piano or an organ and five had victrolas. What music there was in these schools consisted mainly of singing, as a feature work of the general exercises. Three teachers were found giving the technique of music; two of these were in the open country and the other in a village school. There were two instances where children were singing nursery rhymes and dancing folk dances to the victrola. In 26 villages there was, at least, one musical instrument for every building. In most cases there were from two to five instruments in the building. Seven musical machines were noted in these 26 village schools observed. The character of the records was inspected in seven schools. These selections could be classed under the following heads: Popular and patriotic airs, a few selections from the classics, regimental band pieces, and nursery tales and folk songs.

Instruction in music is required by law in the State of South Dakota. However, teachers in the open country schools are not refused a certificate for inability to sing or give instruction in music.

Penmanship.—In nine weeks of visitation the survey committee observed only seven lessons in penmanship. In most schools on only two days per week were lessons given. In the one-teacher school time for penmanship was easily pushed off the already crowded program. Four of the seven lessons observed were in the small towns. The system used was that which the county adopted. In each county visited it was found to be one of the recognized arm movement systems. Only one teacher was observed who had any appreciable training in the subject.

Physiology and hygiene.—Sixteen lessons were observed in the subject. Eight dealt with physiology and eight with hygiene. These lessons were distributed from grades three to eight. In every instance the sole requirement of the lesson was to be able to reproduce the subject matter of the text. The same feeble responses were noted here as in history and geography. There was only one instance where the questions of the teacher were at all skillful. There was not a single lesson where the subject matter of the text was reinforced by outside readings or by experimental illustrations. There was, however, posted upon the wall of most schools visited a vivid set of health rules, issued by the State department of public instruction and indorsed by the South Dakota State Medical Association. These served as silent supplements to the textbooks.

A member of the survey committee had an excellent opportunity to study the work of the Red Cross nurses in two counties. She was present on several occasions when talks and inspections were made by the public health nurses in the schools, and once when a public health talk was a feature of a community meeting. The enthusiasm of both children and community over the coming visit of the nurses were very noticeable. The children had sold the seals, and the coming of a nurse to the schoolhouse was both a vital and novel factor. The frequent calls for the public health nurse made by homes where there were real or suspected cases of illness were evidence of the welcome extended to her by the community.

In each of the counties referred to above, health creeds were presented to each child. Cards showing the status of the child's physical condition, as scored by the examination of the nurses, were given the children to be carried to the parents.

In general it may be said that instruction in physiology and hygiene by the teachers was bookish and remote. The campaign carried on by the Red Cross seal commission was the only avenue afforded to supplement and vitalize the information of the textbooks.

Reading.—Table 38 indicates that of the 96 recitations observed in reading, 69, or 72 per cent, were in the first three grades. It has already been mentioned in the discussion on the course of study that in these grades the process should be concerned with the mechanics of reading. In treating the observation of these reading lessons the discussion deals with the first three grades, apart from the other grades, as marking the line where the process of learning to read changes to that of reading to learn as the syllabus states it.

The 32 lessons observed in the first grade represented every stage of progress. There were in some rural schools pupils who had been in school but a few weeks, or who had missed so much time that their progress marked but a few weeks. It was not uncommon to find two or three divisions in the first grade. Some pupils were still reading from the blackboard, and others had completed their second or third primer. Of the 32 recitations observed in this grade, 20 were mere exercises in word calling. Snatches, like the following, from the field notes very clearly picture this type of lessons: "Pupils drawl." "Teacher looks over child's shoulder and tells him words he does not know." "Words, not sentences, the unit of thought." The treatment of eight of these first-grade lessons could be called good. The features that characterized them as such were: New words sounded and pronounced by children; pictures talked about; sentences or entire lessons read silently; and finally, the sentence or lesson read aloud. The subject matter of four lessons was entirely concerned with phonics.

The process of word calling continued in the second and third grades as in the first. The children read a paragraph, or until the teacher called a halt. If the child did not know a word either the teacher or a pupil told him. After the paragraph or lesson was read it was usual to ask a few questions concerning the subject matter. There were only three instances where these questions were well organized. In one case the teacher read her questions from notes, which was evidence that she had made some preparation of the questions in advance.

The reproduction of the subject matter was very often choppy. The substance of single paragraphs was retold instead of the story as a whole. Frequently the teacher asked a few questions, at the beginning of the lesson, about the story read on the previous day.

In nearly every reading lesson observed in these lower grades the difficult words of the lesson were spelled in the beginning. Little was said about the place of these words in the context. Drill in phonics was observed in only two cases above the first grade.

There were only four instances of dramatization in all these 72 lessons in the first three grades, although the syllabus on reading has especially emphasized dramatization. In the four instances cited the selection of the characters, the stage setting, and the type of acting were determined by the teacher rather than worked out by the pupils. There were three occasions when conversational lessons were killed by being resolved into mere exercises in calling words.

Since reading occupies so much of the time allotment in the first grade, and since the seat work of this grade must be planned by the teacher, a careful study was made of the kind of seat work these children were assigned at the close of the lessons. In only 11 of the 32 recitations were the children assigned any work whatever. Of this group the variety of work was as follows: Writing words or sentences, 6; sentence building, 1; drawing pictures, 2; clay modeling, 1; paper folding, 1.

The words and sentences to be written were from the lesson already read. There was no time to supervise this writing, and as a result it was imperfectly and hurriedly done. Requiring pupils to write a lesson is the easiest way of providing employment for little children. In one instance, the picture to be drawn was from the book and was associated with the lesson. In another, it was foreign to the lesson and the model was imperfect. In the clay-modeling exercise the children were told to model a bird. Inspection of the work by the visitor showed that they had worked out about everything else but a bird. All this indicated that there was a general neglect of seat work in the primary grades and what was assigned was of small educational value to the children.

From what has been said of the character of instruction in reading, in the first three grades, it was evident that the mechanics of reading had not been mastered, and it could hardly be expected that any marked difference would be observed in the instruction in the upper grades. In 25 of the 27 lessons in these upper grades the process was similar to that noted in the lower grades. The children merely read the lesson, a paragraph in turn. The words that they could not pronounce were named either by the teacher or by volunteer pupils of the class. In two lessons a list of words had been assigned in advance. The questions on interpretation of the text asked by the teachers were not planned and well organized. In fact, very few questions were asked concerning the context. It was clear that the teachers realized that the reading was poor, for such admonitions as these were frequently heard: " Now read with expression "; " I'll read it, then you read it."

The two exceptions to these perfunctory exercises in word calling are given. One was a fourth-grade study lesson on " Old Pipes and the Dryad." The story was new to the children. They were told to read to themselves. When they came to a word they did not understand, they discovered the pronunciation for themselves in the list of words at the close of the lesson. The pronunciation and meaning were then discussed. In this exercise no stated number of pages was set for study. The pupils were reading at their own pace. The whole affair was an individual, rather than a class exercise, the teacher passing about the desks giving help where it was asked. Comments upon situations that rose were frequent. Some one suggested that the story was something like the " Pied Piper." This pupil was asked to retell the story about the " Pied Piper." The recitation time ended before the children had finished reading the story. The pleasing thing about the recitation was the interest of the children, the fact that they were reading the story as a whole, and that the mechanics of reading were subordinated to thought getting.

The other exception was a descriptive lesson on "Quails." There was an introductory talk about these birds, and mention of the South Dakota game laws concerning their preservation. The points of the lesson in the book were then discussed. The children were later asked to read a portion of the lesson before being asked to stand before the class and read aloud. This exercise differed from the other in that the lesson had been read in advance and that oral reading was made a feature of the exercise. " Old Pipes and the Dryad " was a longer selection and its reading was not finished in one lesson. Whether there would have been time given to oral reading can be only a conjecture. It may be said, however, that in both these exercises the children were reading to learn.

Exclusive of the nursery rhymes in the first grade, 14 of these recitations were poems. With the single exception of "Hiawatha," these poems were short enough to be treated in a single lesson. There was not an instance where the appreciation of the children was aroused either through personal experiences or through stories or through pictures for the subject matter of the poem. The nearest approach was when a pupil read from the text a paragraph explanatory to the "Skylark." A class reading the "Lesson of the Water Mill" had never seen a mill. A picture would have done much to bring this poem into the children's consciousness. "The Village Blacksmith" was read in a singsong manner. A class confessed they did not like the "Lady of Shalott" because they did not understand it. In the poems observed, the visitor found practically no difference in their treatment from that of the prose selections.

Summarizing the instruction in reading it may be said that in more than two-thirds of the lessons observed in the first three grades the mechanics of reading were not efficiently taught. Full use was not made of the material offered for dramatic and conversational lessons. Phonics were generally neglected. Questions asked by the teachers on the context were few and not well organized. Only limited attention was paid to the excellent suggestion in the course of study relative to the need of making good silent readers. Above the third grade only two lessons out of 27 were efficiently handled. In the poems taught nothing was done in advance to arouse the appreciation of the pupils in the subject matter. These poems were read in the same perfunctory manner as were the poorest prose selections.

Spelling.—Twenty-four recitations were observed in spelling. Table 38 shows them to be scattered through grades two and eight, inclusive. Eight were oral recitations and 16 written. With one exception, the oral spelling was a feature of the primary grades. In 14 written lessons the words were written by the pupils in response to the teacher's dictation. In one lesson all the words were used in sentences; and in another only such as the teacher thought difficult were required to be put into sentences. In all but one instance the pupils exchanged papers and made their own corrections. In the other case the teacher herself made the corrections. The observer noted that a very high percentage of children spelled all the words correctly. The children were more often found studying spelling than any other subject and seemed to enjoy the spelling exercises. This is due to the fact that the learning of a list of spelling words is a much more tangible thing than the reproduction of a narrative in history or geography. Again, the spirit of rivalry aroused in spelling tends to arouse interest.

The words were taken from spelling books in 14 of the 24 lessons. In the remainder they were selected from other lessons. In these lists were included words already familiar and some for which there was no need of learning the spelling. There were two instances where spelling books were in the hands of second and third grade pupils. On numerous occasions the visitor tested the pupils on the meaning of the words taken from spelling books and found that while the words could be spelled they could not be functioned in sentences. One example was a list of words ending in "ary," such as "reactionary," "elementary," etc. Another was a list of words pertaining to railroading—most of which were foreign to the class. One boy, who had some experience in railroading, knew the meaning of all the words.

Summarizing the results of the spelling lessons, it may be said that in two-thirds of the recitations observed children were spelling many words which they were not able to use either in conversation or in writing. In the 87 schools visited no evidence was found of individual spelling lists and the elimination of words with which the children were already familiar. These two features are especially emphasized in the course of study.

Instruction in high schools.—Before discussing the status of instruction observed in the high schools of villages and small towns of South Dakota, it is quite necessary that there be a few statements concerning the regulation for teaching high-school subjects and the gradation of the high schools recognized by the State department of education.

The school law of South Dakota gives the voters of any school district power at their annual meeting to order the teaching of high-school subjects. No instances were recorded where such subjects were taught in the one-teacher schools visited. However, this condition exists. Replies to this question from 500 teachers, in one-teacher schools, scattered throughout the State, indicated that 25 teachers, or 5 per cent, are teaching high-school subjects.

Classes were observed in 17 high schools in the villages and small towns of the State. Fifteen of these schools were listed in the directory of secondary schools for 1917–18, issued by the State department. Their rating was as follows:

TABLE 39.—*Accredited schools.*

	Accredited.	Nonaccredited.		Accredited.	Nonaccredited.
Four-year high schools	7	4	One-year high schools	1	....
Three-year high schools	2	....			
Two-year high schools	....	1	Total	10	5

The reason one school was not listed was probably due to the fact that it failed to make a report, for its equipment and teaching force were such as should have placed it in the four-year accredited group. In the other school one teacher was attempting to do four years of high-school work. Of course this school could not expect any accredit rating. The numbers of teachers in the four-year accredited schools were three and four; in the nonaccredited schools, two and three. This necessarily meant that the high-school teachers in these small-town schools were burdened with preparations in four or five subjects, and were required to teach subjects other than those in which they had made special preparation.

Twenty-three recitations were observed in the high schools of these small towns. In order that the teaching might be representative of normal conditions, the same precautions were taken in observing high-school classes as those already mentioned for the grades. The distribution of subject matter was as follows: English, 8; foreign language, 2; science, 3; history and civics, 6; and mathematics, 4. These recitations were fairly representative of all the four high-school grades.

In three of the English recitations very efficient work was done by the pupils in interpreting masterpieces; in another character effects were skillfully handled; two lessons were practically recited by the teacher; and two drill lessons concerning principles in rhetoric were dull, listless, and not understood by the pupils.

The foreign-language lessons were exercises in translations. In both careful attention was given to construction. One science lesson was taught with the aid of laboratory experiments. The others were merely repetition of the facts in the textbook.

In one recitation in history each pupil wrote upon the blackboard an outline of a topic assigned from the lesson. These outlines were then discussed by the entire class. The remaining recitations in history and civics were reproductions of the text. It was difficult to get responses from the pupils. The tendency was for the teacher to do most of the retelling.

Two mathematics classes furnished excellent drill exercises. In a third lesson problems that the majority of the class had failed in were solved by the few pupils fortunate enough to master them. In a fourth lesson the subject matter could not be comprehended by the pupils because preceding principles were not mastered.

Relative to high-school instruction, it may be said that more than 50 per cent of these high-school subjects were handled effectively. The most glaring fault was the failure to stimulate research on the part of the pupils in the preparation of the lessons.

Final summary.—The observations on physical conditions are based upon visits to 89 rooms in the village schools and 48 in the open-country schools. In the sum total of items these conditions scored higher in the former. In 79 per cent of the open-country schools the lighting was unsatisfactory. There were satisfactory maps in 52 per cent of the open-country schools; and globes in 35 per cent. There were approximately a set of maps and a globe for every school in the small towns. Maps and charts were not used to their capacity. In both types of schools there was a general lack of supplementary readers and illustrative material.

The medium length of time for 62 recitations in the open-country schools was 10.21 minutes. Definite and carefully prepared lesson assignments were noted in 9 per cent of 86 lessons.

The total number of recitations observed in the elementary grades was 286. Only two were in agriculture. Seventy per cent of the arithmetic lessons were drill lessons. There was evidence of a general lack of mastery in the mechanics of calculation. The 56 lessons observed in civics, geography, history, and physiology and hygiene were, with four exceptions, poor attempts at a reproduction of the facts of the lesson assignments of the text. The language teaching was concerned more with the mechanics of language than with oral and written composition. With but few exceptions, technical grammar was confined to the seventh and eighth grades. Very little was attempted in the instruction of the technique of music. Of several lessons observed in penmanship only one teacher had special preparation. Ninety-six lessons were observed in reading. Sixty-nine were in the first three grades. In two-thirds of these recitations the mechanics of reading was not well mastered. Phonics was generally neglected. Of the twenty-seven reading lessons observed above the third grade, only two were taught effectively. The spelling lessons were especially enjoyed by the pupils, although they could not function many words in sentences. The great defect in high-school teaching was the failure to stimulate research on the part of the pupils.

The following characteristics were common to all the teaching observed: Slavish adherence to the textbooks, tendency to wander from the topic under discussion, aimless reviews, and a lack of carefully planned lessons.

In observing the teaching process in the rural and village schools of South Dakota the following question was constantly kept in mind: To what extent was the course of study used as guide? Throughout the discussion in this chapter some specific comparisons have been made between the requirements of the course of study and the kind of teaching seen. These comparisons are herewith collected and explanations made in order that intelligent answers may be made to the above question.

The suggestions on alternation of subject matter in the seventh d eighth grades were very generally followed. The lack of mastery fundamentals in arithmetic indicated that the outline in the sylla- s was not followed. The outline for reading suggests that the chanics of reading should be mastered in the first three grades, d that from then on the child should read for information and preciation. Yet the classroom reading was, practically in every ade, a drill in mechanics. There was not an instance where the ggestions in the course of study on how to study a poem was fol- wed. Attention has been called to the lack of individual spelling ts.

The textbooks were followed literally in civics, geography, his- y, physiology, and grammar. It is true that the course of study r these subjects (with the exception of the supplementary outline physiology) follows the traditional arrangement of the textbooks. t these outlines do show how the subject matter of any textbook y be approached topically. Had the teachers followed these topic its, the textbook teaching might have been more effective.

The very excellent supplementary reading matter on the various bjects of the text could not be used when there was a lack of refer- ce libraries. However, there was more reference material in the ool libraries than was made use of. The same statement has been de concerning maps and globes.

In conclusion it may be said that the textbook was far more often llowed than the course of study. When the course of study was llowed it was usually found to be in the upper rather than lower ades. This was undoubtedly due to the proximity to State eighth- ade examinations.

Realizing that the highest mental efforts are secured when physi- l conditions are at their best, the committee has in another chapter commended an improved physical plant. However, the supreme medy for poor instruction is better-prepared teachers. For an alysis of these qualifications the reader is referred to the recom- endations at the conclusion of Chapter XIV.

Section 2. SUPERVISION.

Requirements of the law.—To inquire into the methods of instruc- on in the several branches taught and to make constructive sugges- ons are among the duties assigned by the school law of South akota to the county superintendents. This single duty of super- sion of instruction is, in itself, in practically every county in the tate, too large a task for one individual. To properly supervise struction it is necessary to visit the classrooms often and to have equent conferences with the teachers. The school law of the State specifies that county superintendents shall visit schools as frequently as possible, with the modification that it shall not be less than once a year. The survey committee found, from conversations with county superintendents, that there were instances where it was physically impossible to visit all the schools of the county in a year.

It is stated in the chapter on county administration and supervision, that the maximum amount allowed for traveling expenses is $400. But not all of this allowance can be used in visiting the schools in the county. Out of it the county superintendents are allowed 5 cents per mile each way for every mile traveled in attending meetings called by the State superintendent. The area of 45 per cent of all the counties in the State is over 1,000 square miles. It is clear, then, that even if the county superintendents had no other duty outside of supervision of instruction the allowance for traveling expenses would prohibit adequate supervision.

County superintendents not trained for supervision.—The educational qualifications of the county superintendents are given in Chapter VII of this survey. Careful consideration of these qualifications would indicate that only about one-third of these superintendents were fitted academically and professionally for supervision. This does not mean that this one-third had other qualifications necessary for supervision. Additional consideration would necessarily be given to their experience, physical status, and personality.

Actual status of supervision.—Reports from county superintendents, given in the chapter on county administration and supervision, indicate the maximum time devoted to supervision as one-half of all their time in the case of eight county superintendents only. The others all gave less time. It is apparent from these answers of county superintendents and from the low requirements of the law that the visits to the schools by South Dakota county superintendents amount to little more than incidental inspection.

An examination of the reports from the State department and observations in various counties indicate that the reading-circle work of the State is well organized. Chapters from the adopted reading-circle books are frequently used to form the bases of the programs at county institutes and associations. County normal institutes of not less than five days' duration are required by law to be held for each county. These institutes, associations, and normals serve indirectly as means of supervision.

Need of supervision.—It has been stated that the supreme remedy for poor instruction is a well-trained teacher. Back of this teacher there must be the supervisor with a broad vision of the educational field, with actual experience in class-room teaching and with a knowledge of and sympathy with rural life conditions. The rural teacher is isolated, and, unless she touches elbows often with those who are able to give help and inspiration, she loses the professional spirit. This was very clearly demonstrated in the South Dakota schools when normal-school graduates were hearing classes in the same perfunctory manner as those who had but half their professional training. The district associations and institutes would mean infinitely more to the teachers if they were conducted by supervisors who knew their problems intimately, and if, instead of stated speeches and papers, there might be free discussions between supervisors and teachers concerning the difficulties that confronted them.

It has been recommended that the course of study contain a very full list of reference books and illustrative material for every subject in the curriculum. The teacher in the open country or small towns has so many lessons to prepare that it is practically impossible for her to do the research work necessary for efficient preparation in all of them. Then, again, it is impossible to get hold of the reference material. To open the avenues to such research, to give hints and methods of instruction, and to see to it, through the medium of circulating libraries, that abundant reference material is available are very important duties of supervision.

The best-organized city systems supplement their teaching force by adequate supervisors. If this is important for the city, how much more important is it for the country, where the teacher does not have daily personal contact with other teachers and is not within reach of reference libraries. Only half the problem of instruction is solved by employing a trained teacher. It takes the efficient supervisor to complete the cycle. To the slacker teacher this supervisor is a righteous goad, to the indifferent a signal for awakening, to the weak a sustaining arm, and to the strong a fountain head of help and inspiration.

Recommendations.—In view of the facts just stated the survey committee recommends the following:

1. That the county superintendent, as chief executive officer, be relieved of the duty of supervision of class-room instruction.

2. That one subject supervisor be employed by the county board of education for each group of 50 teachers.

Chapter XV.

TOWN AND CITY SYSTEMS.

Section 1. GENERAL CONSIDERATIONS.

The towns and cities in South Dakota of over 1,000 populati are all organized under the general school law of the State (exce where Article XI conflicts with this general law, in which case is the law) as independent school districts. There are 39 su towns and cities in South Dakota. For the purposes of this surv they have been rather arbitrarily divided into two groups—th of over 2,000 population being placed in one group and those wi a population between 1,000 and 2,000 being placed in another grou The list is as follows, the population being indicated according the 1915 State census immediately following the name of the c and according to the 1910 Federal census in the second column f lowing the name of the city.

Population of towns and cities of South Dakota.

Cities of over 2,000 population.	1915 census.	1910 census.	Cities of 1,000 to 2,000 population.	1915 census.	19 cen
Sioux Falls	20,929	14,094	Milbank	1,940	2
Aberdeen	11,846	10,753	Flandreau	1,688	1
Watertown	8,313	7,010	Webster	1,640	1
Lead	8,128	8,392	Mobridge	1,551	1
Mitchell	7,785	6,515	Elk Point	1,546	1
Huron	6,112	5,791	Dell Rapids	1,538	1
Yankton	4,771	3,787	Sisseton	1,386	1
Rapid City	4,268	3,854	Beresford	1,332	1
Madison	3,949	3,137	Parker	1,324	1
Brookings	3,416	2,971	Tyndall	1,302	1
Redfield	3,122	3,060	Scotland	1,249	1
Deadwood	3,113	3,653	Woonsocket	1,201	1
Pierre	3,010	3,656	Clark	1,206	1
Vermilion	2,376	2,187	Howard	1,169	1
Canton	2,316	2,103	Wessington Springs	1,142	1
Hot Springs	2,140	2,140	Parkston	1,132	
			Salem	1,132	1
			Centerville	1,109	
			Bellefourche	1,101	1
			Chamberlain	1,055	1
			Sturgis	1,029	1
			Groton	1,028	1
			De Smet	1,014	1

It will be noted that there are 16 of the larger towns and cit and 23 of the smaller.

The total population of the 39 towns and cities in 1915 was 125,4 The total population of South Dakota in 1917 was 582,765. Of t population of South Dakota, therefore, 21.5 per cent is to be fou in the 39 towns and cities listed above. Data from every town and city listed were received in time for inclusion in the findings reported, with the exception of Yankton and Wessington Springs, representing a total population of 5,913.

Legal provisions: Board of education and officers.—These towns and cities are, for educational purposes, under the control of a board of education of five members, each of whom is elected for a three-year period. In addition to the board, there is elected a treasurer, who also serves for three years. In addition to these officers there is a clerk, who is elected by the board from outside the membership of the board. The treasurer and clerk receive compensation, but the members of the board do not.

The law specifically provides that "in order to separate party politics, so far as possible, from school affairs, no descriptive words or symbol to designate the party or principle of any nominee shall appear on the certificate of nomination, or be used or printed on the ballot." There is a slight possibility of the school election being influenced by other considerations in commission-governed cities, where the law specifies that the election for choosing members of the board of education shall occur on the third Tuesday of April, when the mayor and commissioners are being elected.

Provision is made for the transaction of the business of the board in regular meetings, "which shall be held upon the last Friday of each month, but may, in the discretion of the board, be on the second Friday also, and special meetings may be held." In connection with the business of the board, the duties of the officers are those regularly falling to such officers. It is provided that the president of the board shall appoint all committees. The law requires that the clerk of the board shall make an annual report of the condition, financial as well as educational, of all of the schools at the close of each school year. A copy of this is required to be filed with the county superintendent, and such portion of it as the board considers advantageous to the public shall be printed in a public newspaper or in pamphlet form. The law requires the treasurer to prepare a written monthly report showing the financial condition of the school corporation. Within 20 days after the end of the fiscal year, the law requires that the board shall publish in a newspaper a statement of the receipts and expenditures, showing in reference to expenditures the amount paid for teachers and repairs and incidentals. This statement must also show the amount on hand at the close of the fiscal year and in what bank the money is deposited.

Taxing power of board.—The authority to levy the necessary tax is centered in the board of education, who "shall on or before the fifteenth day of August of each year levy a tax for the support of the schools of the corporation." The levy is to be certified to the county auditor by the clerk of the board, who is "authorized and required to extend the levy on the tax roll of the county." The levy must show the amounts it is sought to raise in the several funds, and in taking receipts for money paid over to the treasurer of the board, the receipts must show the proportionate amounts belonging to the several funds for which levy was made. The session laws of 1915 limited the total rate of the annual tax levy in independent school districts to 15¼ mills on the dollar of assessed valuation.

Superintendent of schools.—The law specifies that the "board of education in cities of the first and second class at such times as they shall deem expedient shall elect a superintendent of schools" who is not a member of their own body. His duty "shall be to have a general supervision of the schools of the corporation, subject to the rules and regulations of the board." He "shall hold his office during the pleasure of the board and shall receive such compensation as the board may allow." The only provision in the law in reference to the qualifications required of the superintendent of schools is that "no city superintendent or principal shall be employed who does not hold a first grade or State diploma."

General authority of board.—On the board of education, together with the other officers above indicated, power is conferred to "organize and maintain a system of graded schools, to establish a high school * * * and to exercise sole control over the school and school corporation." Under the law, they must maintain the schools in session daily for five and a half hours exclusive of intermissions, for not less nor more than 10 months in each year.

The board has authority to appoint two competent persons, who with the superintendent as chairman shall constitute the examining committee of the board, with power to examine teachers for their schools and to issue certificates to such teachers legalizing their employment in the schools.

It is made the duty of the clerk of the board annually to take the census of all children under 21 and over 6 years of age residing in the district.

The board is definitely charged with the enforcement of the compulsory education law which requires every child of the age of 8 and not exceeding the age of 16 years to attend school during the entire time the public schools are in session, until he has completed the first eight grades. To guarantee the enforcement of the compulsory education law, the board is required to appoint each year a truant officer to enforce the provisions of the law. The fixing of compensation for his services rests with the board.

While the schools in the towns and cities are required to use the books adopted for the schools of the county, authority is conferred upon them to provide books free for the use of the pupils.

Chapter 225 of the Laws of 1917 provides specifically authority for doing a number of things which had not been definitely covered in earlier legislation. All of these provisions are important, but it seems worth while particularly to draw attention to the authority conferred to supply ample quantities of texts, reference and library books, tools, materials, and all sorts of equipment needed in instruction. Chapter 223 of the Laws of 1917 specifically provides for the use of the public-school buildings and property for other than traditional educational purposes.

Section 2. STUDY OF THE ACTUAL PRACTICES IN TOWNS AND CITIES.

Board meetings.—The data show that of the 35 towns and cities reporting, 31 hold meetings of the board of education monthly, two semimonthly, and two irregularly. Thirty-four of 35 superintendents attend regularly, while one does not always attend.

In reference to those who attend the meetings of the board in addition to the members of the board and the superintendent of schools, 8 report that no one else attends; 15 that the clerk attends; 1 that the school attorney attends; and 2 that the high-school principal attends. The other 9 simply answer that anyone attends. Evidently, these 9 may be combined with the 8 answering that no one else attends, giving 17 out of the 35 towns and cities reporting in which the board meetings are held with only the board of education and the superintendent present, except as interested citizens or persons having official business may attend the meetings.

In all except 7 of the 35 towns and cities reporting, the business of the board is transacted by the entire board. In the other 7 cities, the business is prepared and reported by committees for action of the entire board. The titles of the committees reported by the seven cities are Teachers, Finance, Property, Repairs, Supplies, Purchasing, Building, and Textbooks. Not all of these committees are reported in any one place, of course, but this variety of names is found. In one city, the title Finance and Accounts is reported, and in another, Buildings and Grounds is the designation for one of the committees. It is interesting to note that in the two largest cities of the State the school business is transacted by the board as a whole instead of being reported by committees.

Almost universally, the record of the proceedings and the drawing of warrants are attended to by the clerk of the board. One report shows that the superintendent records the proceedings, one that the superintendent draws the warrants, another that the president of the board draws the warrants, and another that the treasurer of the board draws the warrants.

Thirty-three reports were received in reference to where the board's records and paid invoices are kept. In 32 cases they are kept in the board's office in the school building. In one case they are kept elsewhere. The reports show that the boards of education have the custom of meeting and transacting their business at various places. Of the 35 reporting, but 13 report that the board's business is transacted at a school office. Others report that the board meets in a store, in the bank, in the city hall; while others report "no particular place," evidently meaning that the meetings of the board are held at such places as may be appointed from time to time.

Enforcement of compulsory education.—Data were received from 29 sources regarding the truant officer. The returns show that this officer is paid in every case out of board of education funds, except in those cases where the superintendent, or the police, or the clerk, or the school nurse, or the janitor acts, in which case it is considered that the salary fixed for the main work of the officer covers any duties he performs as truant officer. One reports that the amount paid is not definitely fixed. Four returns show that the amount paid the truant officer is determined by the amount of work he does. In other words, he is paid in accordance with the number of cases he handles and the success he achieves. Two fixed the amount to be paid by the month or year. The returns were definite in reference to the amount paid in 12 communities. The material secured is as follows:

Amount.	Number of towns or cities.
$5.00	1
7.00	1
9.00	1
25.00	1
45.00	2
70.00	1
135.00	1
200.00	1
300.00	1
1,000.00	1
1,200.00	1

Thirty-one returns answer the inquiry in reference to whether the compulsory-education law is satisfactorily enforced, giving the opinion that it is, eight that it is not, and one saying that it is only fairly satisfactory. The reasons assigned for this law not being satisfactorily enforced are: "Conditions due to the war"; "Impossibility of enforcing it under the present law"; "Failure of the board to provide a truant officer"; and a belief expressed by two that there is no need of enforcing it. Conversation with a number of superintendents brought out the fact that the obstacle in enforcing the law is the broad general provision in the law specifying "that this section shall not apply to a child otherwise instructed by a competent person." They told the writer that this provision makes it practically impossible to enforce the law without great difficulty.

Encouraging professional growth.—In response to the inquiry as to the provision made by boards of education in South Dakota for encouraging the superintendents, supervisors, and other officers of the schools to keep abreast of the times, 31 replies were received. Six said no provision was made. One frankly reported that the board of education encourages professional growth by such means as the following: Allowing teachers time off, and paying a portion of the expenses involved in visiting conventions and other schools. Two reports are of outstanding significance, one showing that the board of education allows $100 per year additional to any teacher who attends summer school, the other that the board pays the tuition and transportation expense connected with attending summer school, this remuneration being available to any teacher of the system every other year.

Growth of teaching staff.—In reference to the reading and studying on the part of teachers during the year of the survey, 29 reports were received. The returns show correspondence work was being carried in 2 towns and cities; extension work in 7; State reading-circle work in 9; study of special books in 4; study of penmanship in 3; while 4 did not return usable data. In 18 towns it was reported that meetings were held in connection with the work the teachers were doing, while 6 said no meetings were held. Seventeen answered the inquiry as to when the meetings were held, 5 meeting twice per year; 3 meeting monthly; 2 holding four meetings per year; 2 meeting weekly; 1 three meetings per year; 1 meeting every six weeks; 1 meeting biweekly; and 2 occasionally. Of the 17 reporting the meetings, 8 indicated that the meetings are conducted by the superintendent; 5 that they are conducted by the county superintendent; and 4 that they are conducted by university or college instructors.

In addition to the reading and studying, and the meetings held in connection therewith reported above, 25 reported meetings held for other purposes. Six reported meetings held monthly; 4 weekly; 2 biweekly; and 13 meetings held "occasionally," "frequently," or "as need arises." Twenty-three answered in reference to the purpose of these meetings as follows, 19 saying they are for some phase of professional work, 3 that they are for social purposes, and 1 that they are for inspirational ends.

The above data, taken in connection with the reports by teachers in reference to the limited number of books purchased and the limited supply of educational magazines taken, would suggest that there is need for some method of encouraging those types of reading and studying which result in professional growth.

The school day.—The data received in regard to the length of the school day may be tabulated as follows:

TABLE 40.—*Length of school day.*

	Frequency of cases.
5 hours	3
5 hours 5 minutes	2
5 hours 15 minutes	1
5 hours 25 minutes	2
5 hours 30 minutes	6
5 hours 40 minutes	3
5 hours 45 minutes	6

From the above data it will be seen that eight schools do not maintain a school day of standard length under the law, which requires a day of five hours and a half in length. Six are meeting the requirement of the law, whereas nine exceed the requirement of the law.

Promotion.—Twenty-nine towns and cities report promotions are made annually, while five report they are made semiannually. These figures do not quite harmonize with the returns on the inquiry in reference to how many times during the school year beginning pupils are received. These returns show that in 12 towns and cities they are received twice per year, although but five systems report semiannual promotions. The remaining cities report that they receive pupils but once a year, which is as one would expect in systems promoting annually.

In reference to the method of determining promotion, one reports that this matter is determined upon the basis of credits, beginning with the sixth grade; six that it is determined upon the basis of credits beginning with the seventh grade; five that it is determined upon the basis of credits beginning with the eighth grade; whereas 21 report that promotion is by grades throughout the elementary schools.

The junior high school.—Thirty-five returns were received in response to the inquiry regarding the maintenance of junior high schools. Four report they are maintained, 31 that they are not. Of the four having what is called a junior high school, three have the seventh and eighth grades in this school, while one has merely the eighth grade. All report other grades in the same building with the junior high school. The data received would indicate that not any of these towns or cities yet has a real junior high school. What exists is a departmental organization of the teaching in the seventh and eighth grades, but the other opportunities which should be offered by a junior high school, such as wider subject-matter opportunities, prevocational studies, and appropriate social, literary, and athletic advantages, are not adequately provided.

Uses of the school building.—Thirty reports were received in reference to the use made of school buildings other than for school purposes. Seven cities report that the buildings are used for community meetings, 7 that they are used for meetings connected with school work, 3 that they are used for war work, 1 that a school building accommodates a city library, and 1 that school buildings are used for voting places, while 11 report no use of school property except for actual school work. This limited use of school properties is probably due to the fact that there was no legal basis for making use of school buildings until section 1 of chapter 223 of the Laws of 1917 was enacted.

Only 10 school systems report any efforts put forth to aid community work, and of these 10 five were in connection with war work. But 14 out of 25 reporting indicate any help received by the school from the cooperation of business men and prominent citizens of the community. But 16 out of 31 reporting indicate any parent-teacher organizations. Evidently there is large room for bringing great values to the schools through increasing and multiplying the relationships existing between the schools and the other community activities in the various towns and cities.

Summer schools.—Of 37 reporting, but 12 report any provision for continuing the education of the children during the summer vacation. In these 12 towns and cities the expense for schooling is financed out of public funds in but six places, although part of the expense is borne by public funds in two other places. In the remaining towns the entire expense is met by other than public funds.

Playgrounds.—Of the 35 schools reporting, 3 state that public playgrounds are maintained by public funds, 1 that they are maintained by money derived from popular subscription, and 1 that they are maintained by funds raised by parent-teacher organizations. The other 30 report no provision for public playgrounds.

Rules and regulations.—But 14 of the 37 towns and cities report any printed or typewritten rules and regulations for the guidance of teachers and the head of the school system, or for the government of the schools. Seven of these were reported from towns and cities of less than 2,000 population. Five of these were merely one or two-page typewritten regulations, while two were issued in printed form bearing the date of 1910. In one of these towns the rules and regulations cover 9 pages and in others 18 pages. In the latter case the entire system was covered rather thoroughly. In the towns and cities with above 2,000 population two reported only typewritten rules and regulations, whereas four systems had printed rules and regulations, these varying in extent from 5 pages in two cities to 37 pages in one, and 57 in another.

It would certainly make for stability and for uniformity in the management and discipline of the schools if these towns and cities more generally committed to print the organization within the system and the standards expected of all—superintendent, principals, teachers, janitors, and pupils. Such a statement could not but exercise a wholesome influence throughout the schools and the community served.

School bulletins.—As a means of gaining as intimate an insight into the spirit and detailed management of the school system as possible, request was made for one copy of each school bulletin issued from the superintendent's office within a year. Only 8 of the 37 systems sent any bulletins in response to this request. It was disappointing to find that the bulletins in most of these systems were concerned almost wholly with routine matters. There were three notable and outstanding exceptions to this general situation, however. In the office of each of two superintendents a representative of the survey spent some time going over copies of bulletins sent out to the teaching staff, the larger percentage of which were breathing the modern point of view in education, suggesting new ways of working, reporting good results seen, and pointing the way to larger undertakings and results. These items from the index to the bulletins of one superintendent are suggestive of the rich and profitable character of his communications to his teaching staff:

Date.	Page.	
Aug. 26	1	Diagram—Managerial type of organization.
	2	Explanation—Managerial type of organization.
	3	Continuation of page 2.
	4	Public-school corps for 1916–17.
Sept. 4	1–2	Three basic business considerations.
		A five-point marking system.
18		Educational measurement.
22		Responsibility for reviews in arithmetic.
29	1	City-wide spelling test (first).
	2	City-wide spelling test (graph).
	3	City-wide spelling test (continued).
Oct. 5	1	General handwriting statement.
		Time schedule.
		Awards and certificates (drills, etc.).
10		Uniform tests.
		Premiums for perfect punctuality and attendance.
		Poor-progress blanks.
19	1	The coach room.
		The coaching attitude and method.
30	1	Standard tests for pupil diagnosis.
		Teaching economy.
		Picture committee.
		Grade-course committees.

Date.	Page.	
Nov. 6	1	Committee on playground games.
		Committee on elementary handwork.
		Progress in committee work.
		Final written examinations in grades, kindergarten to sixth, inclusive.
	2	Starch reasoning test—scores and graph.
9	1	Speed and Ayres quality of handwriting, September, 1916.
15	1	Woody test in addition of whole numbers.
17	1–3	Rating one's efficiency.
Jan. 4	1	Professional facts for the superintendent's file.
		Motivating school activities.
11	1	The Woody tests in the fundamental number operations.
		Silent reading tests.
		Silent reading test (comprehension).
	2	The marble statue—Whipple.
	3	Woody subtraction test—scores and graph.
	4	Woody multiplication test—scores and graph.
	5	Woody division test—scores and graph.
18	1	The superintendent's books.
		A school exhibition and the State fair.
		Report of committee on elementary handwork.
24	2	Paper and cardboard construction (outline of work).
	1	Directory.
Feb. 5	1	Putting first things first.
		Daily plans.
		Substitutes.
		School on stormy days.
	2	Programs on February 12 and 22.
13	1	Reorganization and building plans of the board of education.
	2	Advantages of the junior high school.
		Cost of operation (comparisons).
20	1	Motivation reports.
		Good-manners pamphlets.
		Kansas City meeting.
		Renewing our ideals.

Blanks and forms.—In five systems the general judgment of the survey was that the blanks and forms used in the transaction of business were worked out with care and were adequate in number and kind to meet the various needs. In the other systems, however, many things must have gone without written record, the business being transacted by oral requests and reports. This conclusion is a general one, however, as it was found impossible to make comparisons of the various forms and blanks used in the 39 systems with a view to standardizing the blanks required, which would have been necessary before a careful and scientific judgment could be rendered.

It was disappointing to find but 5 systems reporting any type of cumulative record card for the preservation of the records of pupils. Likewise but 5 systems reported any schedule as a basis for working out the daily programs.

But two printed official reports were received. The other reports were made out upon standard forms for the use of clerks and treasurers.

Section 3. THE SUPERINTENDENTS IN THE TOWNS AND CITIES OF SOUTH DAKOTA.

Evidently one of the most important factors in determining the character of the educational opportunities provided the children in the towns and cities of South Dakota is the superintendent of schools. The facts in the tables appearing in the following pages, together with their interpretation, present a fairly adequate view of the leadership provided in education in the towns and cities under study.

Preparation.—The first requisite in judging the equipment for leadership possessed by the superintendents of South Dakota is a knowledge of their training. The following tables present the data showing the training of the superintendents or school heads in the 37 towns and cities from which complete data were received. In the first column of each table the facts are presented regarding the superintendents in cities of over 2,000 population, and in the column following that corresponding data regarding the superintendents in the towns with between 1,000 and 2,000 population.

TABLE 41.—*Elementary and high-school training of 37 superintendents.*

Character and place of training.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
Elementary school training:			
Rural—			
In South Dakota		3	3
Out of South Dakota	6	10	16
Town—			
In South Dakota			
Out of South Dakota	2	3	5
City—			
In South Dakota		1	1
Out of South Dakota	4	3	7
High-school training:			
Town—			
Less than 2 years—			
In South Dakota			
Out of South Dakota			
Less than 3 years—			
In South Dakota			
Out of South Dakota	1		1
Less than 4 years—			
In South Dakota			
Out of South Dakota	3	2	5
Four years—			
In South Dakota		1	1
Out of South Dakota	2	6	8
City—			
Less than 2 years—			
In South Dakota			
Out of South Dakota	1		1
Less than 3 years—			
In South Dakota			
Out of South Dakota		1	1
Less than 4 years—			
In South Dakota		1	1
Out of South Dakota	3	2	5
Four years—			
In South Dakota			
Out of South Dakota	2	5	7

A glance at this table shows that of the present superintendents in South Dakota practically all received their elementary and high-school training outside of South Dakota.

TABLE 42.—*Normal school training of 37 superintendents.*

Years and place of training.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000	Total.
Less than 1 year:			
In South Dakota		2	2
Out of South Dakota			
One year but less than 2 years:			
In South Dakota	1		1
Out of South Dakota			
Two years:			
In South Dakota			
Out of South Dakota			
More than 2 years:			
Out of South Dakota, 4 years, but no high-school basis	1		1
In South Dakota, 4 years, but no high-school basis		1	1
In South Dakota, 5 years, but no high-school basis		1	1

TABLE 43.—*College training of 37 superintendents.*

Years of training.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
1 year	2	2	4
2 years	2		2
3 years			
4 years	7	8	15
4½ years		2	2
5 years	1	2	3
5½ years		1	1
6 years	1		1
Total	13	15	28

In addition to the training included above, one superintendent studied two years for the ministry, one took two years of correspondence study, another took one year of extension work in the University of South Dakota, one had a year of business college training, and another had a half year of training in woodwork and agriculture.

TABLE 44.—*Showing summer-school training of 37 superintendents.*

Amount in weeks.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
6 weeks	2	5	7
12 weeks	2	2	4
18 weeks	1	2	3
24 weeks	3	2	5
30 weeks	1	1	2
36 weeks	1		1
Total	10	12	22

From the tables pertaining to the normal school and college training of the 37 superintendents, it is easy to determine that the total amount of training in years is 133½ and, in addition thereto, 400 weeks of summer-school training.

The second body of facts gathered as a basis for estimating the professional equipment of superintendents pertains to their teaching experience. This is presented in the tables below:

TABLE 45.—*Distribution in the experience of 37 superintendents.*

Experience in years.	Total experience.		Rural and village schools.		In cities of 1,000 to 1,999.		In cities of 2,000 to 4,999.		In cities of 5,000 and above.	
	Superintendents in cities of 2,000 population or above.	Superintendents in cities having a population of from 1,000 to 2,000.	Superintendents in cities of 2,000 population or above.	Superintendents in cities having a population of from 1,000 to 2,000.	Superintendents in cities of 2,000 population or above.	Superintendents in cities having a population of from 1,000 to 2,000.	Superintendents in cities of 2,000 population or above.	Superintendents in cities having a population of from 1,000 to 2,000.	Superintendents in cities of 2,000 population or above.	Superintendents in cities having a population of from 1,000 to 2,000.
Less than 2 years			4	2		6		1	1	3
2 to 4 years		1	2	7	2	7	3	3		1
5 to 7 years		4	2	7	1	2	1	3	1	
8 to 10 years		4	1	1					2	
11 to 15 years	4	5		1		2	2	1	2	
16 to 19 years	2	2		1		1	1		4	
20 to 25 years	5	3								
More than 25 years	1	1								
Total	12	20	9	19	3	18	7	8	10	4

TABLE 46.—*Distribution in the variety of the experience of 37 superintendents.*

Type of experience.	Cases of each type of experience.		
	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
Special	3	7	10
Rural	8	12	20
Village	6	16	22
In city of 1,000	3	18	21
In city of 2,000 to 5,000	7	8	15
In city of 5,000 and above	10	4	14
Total	37	65	102

TABLE 47.—*Place of birth by States or countries of 37 superintendents.*

Birthplace.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
South Dakota		1	1
Iowa	4	2	6
Michigan	1		1
Pennsylvania	1		1
Ohio	1	1	2
Kansas	1		1
Illinois	1	2	3
Indiana	1	3	4
Wisconsin	1		1
Minnesota		4	4
Missouri		2	2
Maine		1	1
Norway		2	2
England		1	1
Not reporting	3	3	6
Total	15	22	37

The salary paid the educational leader in each community is evidently a vital factor in determining the character of leadership which each community can expect to attract. The table below gives these facts:

TABLE 48.—*Distribution of the salaries paid 37 superintendents.*

Amount.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
Less than $1,500		8	8
$1,500 to $2,000	2	11	13
$2,000 to $2,500	5	1	6
$2,500 to $3,000	3		3
$3,000 to $3,500	1		1
$3,500 to $4,000	1		1
Not reporting	3	2	5
Total	15	22	37

It was not found possible to figure the living expenses of the superintendents from the data presented. This matter is more difficult to reduce to a comparable basis than in the case of teachers, for the reason that most of the superintendents are married men with families, their responsibilities varying according to the size of the family.

Likewise it is hardly necessary to present the data of the place of residence of superintendents. As a matter of fact, 25 of the 37 superintendents have a permanent residence in the town where they are working, while six do not. Six made no report on the matter.

TABLE 49.—*Age distribution of 37 superintendents.*

Years of age.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
27		1	1
28		2	2
29		1	1
30		2	2
31		1	1
33		1	1
34	1		1
35	1		1
36		1	1
37	1	2	3
38	1	1	2
39			
40	2	1	3
41		2	2
42	1	1	2
43	1	1	2
44	1		1
47	2		2
49		1	1
50	1		1
53		2	2
Not reporting	3	2	5
Total	15	22	37

The median age of the superintendents in cities of over 2,000 population is 42, while that in the towns below 2,000 is 37½ years.

TABLE 50.—*Distribution in the number of married and single superintendents.*

Married or single.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
Single		3	3
Married	12	17	29
Not reporting	3	2	5
Total	15	22	37

TABLE 51.—*Answers to the question as to whether the superintendents expect to continue educational work.*

Intentions.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
Will continue	11	17	28
Will not continue	1	3	4
Not reporting	3	2	5
Total	15	22	37

TABLE 52.—*Reasons assigned by 37 superintendents for inclining to continue or discontinue educational work.*

Reasons.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
Like the work	10	10	20
Influenced by salary		2	2
Preparation		2	2
Better opportunities in other lines		2	2
Inaptitude for the work	1	6	7
Not reporting	4		4
Total	15	22	37

TABLE 53.—*Organizations in which the 37 superintendents hold membership.*

Organization.	Superintendents in cities of 2,000 population or over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
National Education Association	11	4	15
South Dakota Teachers' Association	11	20	31
Reading Circle	1		1
Miscellaneous	4		4
Rotary Club	1		1
Commercial Club	2	2	4
Parent-Teacher Association		1	1
Red Cross		4	4
Young Men's Christian Association		1	1
Total	30	32	26

There is certainly cause for serious regret that aside from educational relationships, the number of superintendents reporting the establishment of other relationships is negligibly small. But one reports membership in a rotary club and but four in a commercial club. The superintendent in every community needs the stimulus which comes from contact with the business men in his community. He likewise needs the opportunities which this contact affords for enabling these business men to know his point of view and to know the objectives of the school he is heading, and likewise the ways and means which are being employed for the realization of the school's objectives. Even though his contribution to the civic organization may be small, the values coming to the school through his relationship are so many and so vital that no educational leader should allow himself to omit the establishment of these ties.

The superintendent's disposition to grow and to become a capable professional leader may be measured somewhat by the investment he makes in a professional library and by the amount of reading and studying he does. The following list shows the books reported as being used. The figure following the name of each book shows the number reporting it. In addition to these books, 30 other titles were reported, each being mentioned but once.

Classroom Management—Bagley	7
Methods of Teaching in High Schools—Parker	6
Motivation of School Work—Wilson and Wilson	6
How to Teach—Strayer and Norsworthy	5
Psychology of High School Subjects—Judd	5
Principles of Education—Jones	4
Supervised Study—Hall-Quest	4
Educational Administration—Strayer and Thorndike	3
Educational Measurement—Starch	3
The Modern High School—Johnston	3
School Administration—Cubberley	3
Teaching the Common Branches—Charters	3
Methods of Teaching—Charters	2
Cyclopedia of Education—Monroe	2
School and Society—Dewey	2
Schools of To-Morrow—Dewey	2
School Administration and Supervision—Chancellor	2
Discipline of the School—Morehouse	2
Educative Process—Bagley	2
Educational Psychology—Thorndike	2

The magazines reported on the reading lists of the superintendents seem to permit the classification shown in the table below. Thirteen different educational journals were reported, 10 current literary and political magazines were mentioned, 3 magazines pertaining to special subjects and dealing with school devices were listed, while 3 magazines falling in the type of fiction and miscellaneous were included in the returns.

TABLE 54.—*Character of the magazines read, together with the frequency of the use of each type among the 37 superintendents.*

Character of magazines.	Superintendents in cities of 2,000 population and over.	Superintendents in cities having a population of from 1,000 to 2,000.	Total.
Educational journals	29	33	62
Special subjects and school devices	3		3
Current literature and political	11	19	30
Fiction and miscellaneous	1	24	25
Total	44	76	120

Section 4. THE TEACHERS IN THE TOWNS AND CITIES OF SOUTH DAKOTA.

Preparation.—The first requisite in judging of the professional ability of any group of teachers is a knowledge of the training they have had for their work. The following data regarding the 593 teachers from whom the returns from the 37 towns and cities above 1,000 population were sufficiently accurate to be usable were tabulated throughout in such way as to show the facts regarding those teachers reporting from cities of 2,000 population or over in one column, and the corresponding facts from those teachers reporting from cities having a population of from 1,000 to 2,000 in another column:

TABLE 55.—*Elementary and high-school education of 593 elementary school-teachers.*

Time.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Elementary school training:			
Rural—			
In South Dakota	46	30	76
Out of South Dakota	43	9	52
Town—			
In South Dakota	76	54	130
Out of South Dakota	105	39	144
City—			
In South Dakota	93	8	101
Out of South Dakota	74	33	107
High-school training:			
Town—			
Less than 2 years—			
In South Dakota	8	3	11
Out of South Dakota	8	1	9
Less than 3 years—			
In South Dakota	13	5	18
Out of South Dakota	9	3	12
Less than 4 years—			
In South Dakota	10	12	22
Out of South Dakota	14	2	16
Four years—			
In South Dakota	39	54	93
Out of South Dakota	92	27	119
City—			
Less than 2 years—			
In South Dakota	1	2	3
Out of South Dakota	1	2	3
Less than 3 years—			
In South Dakota	8	2	10
Out of South Dakota	2	1	3
Less than 4 years—			
In South Dakota	11	1	12
Out of South Dakota	9	6	15
Four years—			
In South Dakota	88	12	100
Out of South Dakota	63	15	78

A glance at the table shows that the number who received their training outside the State is almost equal to the number who had corresponding training within the State. Almost half of the teachers studied did not spend their early childhood and take their training in South Dakota.

TABLE 56.—*Normal school training of 593 elementary school-teachers.*

Time.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Less than 1 year:			
In South Dakota	21	12	33
Out of South Dakota	21	12	33
One year but less than two years:			
In South Dakota	74	36	110
Out of South Dakota	28	8	36
Two years:			
In South Dakota	43	25	68
Out of South Dakota	74	24	98
More than 2 years:			
In South Dakota	55	18	73
Out of South Dakota	36	4	40

TABLE 57.—*College training of 593 elementary school-teachers.*

Time.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Less than one year:			
In South Dakota	15	7	22
Out of South Dakota	94	23	117
One year, but less than two years:			
In South Dakota	25	4	29
Out of South Dakota	28	6	34
Two years, but less than three years:			
In South Dakota	14	8	22
Out of South Dakota	21	3	24
Three years, but less than four years:			
In South Dakota	4	1	5
Out of South Dakota	6	3	9
Four years:			
In South Dakota	4	2	6
Out of South Dakota	7	1	8
More than four years:			
In South Dakota	3	....	3
Out of South Dakota	5	1	6

The second body of facts necessary to forming an estimate of the professional equipment of any body of teachers is a knowledge of their teaching experience.

TABLE 58.—*Variety of experience of 593 elementary school-teachers.*

Type of experience.	Cases of each type of experience.		
	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Special	27	4	31
Rural	211	88	299
Village	187	90	277
City of 1,000	104	167	271
City of 2,000 to 5,000	232	20	252
City of 5,000 or above	323	11	334
Total	1,084	380	1,464

TABLE 59.—*Positions now held by 593 elementary school-teachers.*

Positions.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000	Total.
Principal	36	2	38
Teacher in kindergarten	12	1	13
Teacher in first grade	48	22	70
Teacher in first and second grade	11	2	13
Teacher in second grade	32	18	50
Teacher in second and third grade	6	1	7
Teacher in third grade	34	19	53
Teacher in third and fourth grade	20	3	23
Teacher in fourth grade	32	18	50
Teacher in fourth and fifth grade	5	1	6
Teacher in fifth grade	29	14	43
Teacher in fifth and sixth grade	17	4	21
Teacher in sixth grade	27	14	41
Teacher in sixth and seventh grade	1	2	3
Teacher in seventh grade	15	12	47
Teacher in seventh and eighth grade	2	3	5
Teacher in eighth grade	12	10	22
Teacher in departmental work	56	9	65
Teacher of manual training	2	2	4
Teacher of domestic science	3		3
Supervisor of drawing	4		4
Supervisor of drawing and music	1	2	3
Supervisor of music	11	6	17
Supervisor of writing	4		4
Supervisor of writing and music	1	1	2
Supervisor of physical training	5		5
School nurse	1		1
Total	427	166	593

It is interesting to note the small number of supervisors of drawing, there being only four in the 37 cities. The amount of attention given to music, as indicated by the number of supervisors employed, is much greater. Writing uses the time of but four supervisors, and domestic science employs but three teachers in the elementary schools, while there is but one teacher reporting who scheduled herself as a school nurse.

TABLE 60.—*Salaries of 593 elementary school-teachers.*

Amount.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Less than $450	1	2	3
$450-$629	28	60	88
$630-$719	140	81	221
$720-$809	128	13	141
$810-$899	65	3	68
$900-$1,000	30	1	31
Above $1,000	33	3	36
Not reporting	2	3	5
Total	476	166	593

It is seen that the income of the larger number of the teachers reporting falls between $630 and $809. Reference to the table showing the positions now held by the teachers studied reveals the fact that the 36 who are receiving above $1,000 are in all probability principals of schools.

TABLE 61.—*Living expenses of 593 elementary school-teachers for the school year.*

Amount.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
At home	26	14	40
Less than $180	6	5	11
$180-$224	18	32	50
$225-$299	140	83	223
$300 or above	212	11	223
Not reporting	25	21	46
Total	427	166	593

A glance at this table shows that the large majority of the teachers report an expense of above $225 per year. Indeed, the number reporting an expense from $225 to $300 is precisely the same as the number reporting that it is above $300. It will be observed that 46 made no report. It was their judgment that this was too private a matter to be reported. Thus certain data were withheld which must be in hand if the arguments necessary to secure increased salaries are to be brought to bear effectively on those having in charge the regulation of salaries.

TABLE 62.—*Distribution of 593 elementary school-teachers living at home or elsewhere.*

Place of residence.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
In home town	177	57	234
Not in home town	248	108	356
Not reporting	2	1	3
Total teachers	427	166	593

Almost three-fifths are nonresident teachers in the community where they are at work. This is a factor, of course, making it necessary that the wages of teachers should be in keeping with the added expense by reason of teaching where they can not live at home.

TABLE 63.—*Distribution in age of 593 elementary school-teachers.*

Years of age.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
20 or less than 20	6	4	7
21	5	10	15
22	15	15	30
23	31	15	46
24	35	11	46
25	43	24	67
26	42	13	55
27	38	11	49
28	29	11	40
29	21	7	28
30	21	7	28
31	17	7	24
32	14	4	18
33	7	2	9
34	5	2	7
35	12	5	17
36	9	1	10
37	2	1	3
38	16		16
39	10	2	12
40	7		7
41	2		2
42	3	1	4
43	5		5
44	4	1	5
45 or more	9	9	18
Not reporting	22	3	25
Total teachers	427	166	593

A study of this table shows that the median age of teachers in cities of 1,000 to 2,000 is 26 years, while that in cities of above 2,000 is 28 years. Following the age of 32, the number drops very rapidly.

TABLE 64.—*Distribution of single and married teachers among 593 elementary school-teachers.*

Married relation.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Single	394	152	546
Married	25	8	33
Widow	6	6	12
Not reporting	2		2
Total teachers	427	166	593

TABLE 65.—*Distribution of answers to the question as to whether the 593 elementary school teachers expect to continue teaching.*

Intentions.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Will continue	252	96	348
Will not continue	110	51	161
Undecided	45	10	55
Not reporting	20	9	29
Total teachers	427	166	593

The number who will not continue, or who are in doubt, shows the largeness of the problem of developing a fundamental concern for the business of teaching in the body of teachers under study.

TABLE 66.—*Distribution of the reasons assigned for continuing or discontinuing teaching by 593 elementary school-teachers.*

Reasons.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Like the work	129	41	170
Influenced by salary	46	23	69
Preparation	48	16	64
Support	15	4	19
Prefer it to other work	29	9	38
Too hard work	5	4	9
Health	3	1	4
On account of the war	2	....	2
Marriage	7	2	9
Patriotic duty to remain	1	....	1
Go to school or change occupation	106	13	119
Not reporting	36	53	89

Those who are discontinuing assign in the main two significant reasons—continuing education and changing the occupation.

TABLE 67.—*Organization in which the 593 elementary school-teachers hold memberships.*

Organization.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
South Dakota Education Association	321	100	421
District Education Association	16	3	19
National Education Association	4	2	6
National Music Association	5	1	6
State Music Association	3	2	5
Parent-Teacher Association or Mother's Club	82	7	89
Reading Circle	16	26	42
Local Study Club	27	8	35
Red Cross	253	64	317
Civic Organization	17	5	22
Young Women's Christian Association	16	1	17
Women's Clubs	4	2	6
Miscellaneous	6	....	6

Not one of these organizations succeeded in enrolling every teacher. The South Dakota Education Association came nearest it, with 421, and the Red Cross came next, with 317.

The teacher's disposition to grow and to take her work seriously may be measured somewhat by the investment he makes in professional helps and by the amount of reading and studying he does.

The total number of books reported by all concerned was 108. Of the entire list of books, 18 were mentioned by but two teachers, while 39 were mentioned by but one. The book mentioned by most teachers was Strayer and Norsworthy's "How to Teach." It was listed by 61 teachers. The six most frequently mentioned books, with the frequencies of mention, are as follows:[1]

How to Teach, Strayer and Norsworthy	61
Motivation of School Work, Wilson and Wilson	59
Teaching the Common Branches, Charters	42
School Measurement, Bagley	36
How to Study, McMurry	23
Socializing the Child, Dynes	22

TABLE 68.—*Kinds of books read and distribution of this reading among 593 elementary school-teachers.*

Kind of book.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Games	33	17	50
Stories and story telling	80	34	114
Books on school subjects or textbooks	367	90	457
Plan or device books	99	59	158
Reference books	104	25	129
Miscellaneous	118	21	139
Total	801	246	1,047

It is seriously to be regretted that only 50 teachers out of 593 mention any book dealing with games; and only 114, any dealing with stories and story telling. Even the number of teachers mentioning books on school subjects or textbooks is only 457—136 less than the total number reporting. It will be observed that the total number of teachers reporting with reference to all the kinds of books listed is but 1,104—less than two books per teacher. Undoubtedly some provision should be made whereby it is possible to insure that every teacher in the public schools shall every year invest a few dollars in modern books which should be a help to her in her daily duties, and likewise to insure that these books are understandingly read.

The six magazines most frequently mentioned, together with the frequencies of mention, are as follows:

Normal Instructor and Primary Plans	300
Literary Digest	108
Current Events Magazine	108
National Geographic Magazine	102
Primary Education	77
American Magazine	56

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[1] These are recent State Reading Circle books.

TABLE 69.—*Character of magazines read, together with the frequency of their use among 594 elementary school teachers.*

Type of magazine.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Educational journals	92	38	130
School devices and special subjects	352	152	504
Current literature and political	79	124	203
Fiction and miscellaneous	286	65	351
Total	809	379	1,188

Section 5.—ATTRACTING POWER OF TOWN AND CITY SCHOOLS.

One measure of the efficiency of a school system is the extent to which it enrolls the youth of school age in the community. The following tables show the enrollment of the school population in the towns and cities of South Dakota:

TABLE 70.—*Cities of over 2,000 population.*

City.	Total school census.	Total elementary and high-school enrollment.	Percentage of enrollment to census.
1	4,996	3,813	76.3
2	2,986	2,162	72.4
3	2,480	1,529	61.7
4	2,103	1,579	75.1
6	1,443	1,300	90.1
7	1,112	1,057	92.3
8	1,065	844	79.3
9	1,034	790	76.1
12	745	673	90.3
14	670	506	75.5

TABLE 71.—*Towns of 1,000 to 2,000 population.*

Town.	Total school census.	Total elementary and high-school enrollment.	Percentage of enrollment to school census.
1	734	530	72.7
4	550	455	80.2
6	482	393	81.1
7	429	435	100.1
13	452	391	86.4
15	329	179	54.4
20	348	299	85.9
21	310	280	90.0

It will be observed that the cities of above 2,000 population vary in their enrollment of the census population from above 90 per cent in cities 6, 7, and 12 to as low as 61.7 per cent in city No. 3, while the range in the towns is from above 100 per cent to as low as 54.4

per cent. To measure with careful justice the extent to which each town and city is meeting its responsibility for the education of its children, other data than those at hand are needed. Manifestly, however, many of the towns and cities enrolling such a low percentage of the children are not meeting their responsibility adequately. One factor which operates heavily in some communities in reducing the public-school enrollment is the parochial-school enrollment. To the extent that this factor enters in, the public schools are blameless. Town 7, enrolling over 100 per cent of its school census, evidently enrolls many children from outside the town or is growing rapidly.

The following tables show the distribution of pupils by ages and grades in the towns and cities of South Dakota. The percentage of retardation runs very high in all grades above the first in the towns of less than 2,000 population, and in all grades above the second in the cities of over 2,000 population.

TABLE 72.—*Age-grade distribution of pupils in cities with less than 2,000 population.*

	Under 6.	Over 6, under 7.	Over 7, under 8.	Over 8, under 9.	Over 9, under 10.	Over 10, under 11.	Over 11, under 12.	Over 12, under 13.	Over 13, under 14.	Over 14, under 15.	Over 15, under 16.	Over 16, under 17.	Over 17, under 18.	Over 18, under 19.	Over 19, under 20.	Total.	Normal age.		Accelerated.		Retarded.	
																	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Grade I	129	553	180	54	17	3	1									937	553	59	129	13	255	27
Grade II	9	126	296	147	54	25	5	2								664	296	45	135	20	233	35
Grade III	1	29	110	369	176	56	22	14		1						778	369	47	130	18	269	35
Grade IV			12	145	320	176	78	27	14	1	1					774	320	41	157	20	297	39
Grade IV				5	123	328	199	113	54	20	8	3		1		854	328	38	128	15	398	47
Grade VI					6	80	249	165	72	33	13	1				619	249	40	86	14	284	46
Grade VII					3	14	109	208	171	85	27	8	1			626	208	33	126	20	292	47
Grade VIII						1	13	78	257	208	102	34	12	5	1	711	257	36	92	13	362	51
Total	139	708	598	720	699	683	676	607	568	348	151	46	13	6	1	5,963	2,580	43	993	17	2,390	40
Normal age:																						
Number		553	296	369	320	328	249	208	257							2,580						
Percentage		78	50	51	46	48	37	34	45							43						
Accelerated:																						
Number	139	155	122	150	132	95	122	78								993						
Percentage	100	22	20	21	19	14	18	12								17						
Retarded:																						
Number			180	201	247	260	305	321	311	348	151	46	13	6	1	2,390						
Percentage			30	28	35	38	45	52	55	100	100	100	100	100	100	40						

TABLE 73.—*Age-grade distribution of pupils in cities with more than 2,000 population.*

	Under 6.	Over 6, under 7.	Over 7, under 8.	Over 8, under 9.	Over 9, under 10.	Over 10, under 11.	Over 11, under 12.	Over 12, under 13.	Over 13, under 14.	Over 14, under 15.	Over 15, under 16.	Over 16, under 17.	Over 17, under 18.	Over 18, under 19.	Total.	Normal age.		Accelerated.		Retarded.	
																Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Kindergarten	44														44	44	100				
Grade I	379	894	275	61	18	2			1					1	1,631	894	55	379	23	358	22
Grade II	30	293	694	249	108	23	13	4	3						1,417	694	48	323	24	400	28
Grade III		2	263	700	320	118	31	17	7		1				1,459	700	48	265	18	494	34
Grade IV			8	238	583	340	151	71	31	11	3				1,436	583	41	246	17	607	42
Grade V				10	277	600	338	151	79	29	13	1			1,498	600	40	287	19	611	41
Grade VI				8	70	226	476	365	179	68	24	7	1	1	1,425	476	34	304	21	645	45
Grade VII				1	9	55	190	351	283	148	63	21	3	1	1,125	351	31	255	23	519	46
Grade VIII						16	55	140	241	190	109	47	11	4	813	241	30	211	26	361	44
Total	453	1,189	1,240	1,267	1,385	1,380	1,254	1,099	824	446	213	76	15	7	10,818	4,583	42	2,270	21	3,995	37
Normal age:																					
Number	44	894	694	700	583	600	476	351	241						4,583						
Percentage	10	75	56	55	42	43	38	32	29						42						
Accelerated:																					
Number	409	295	271	257	356	297	245	140							2,270						
Percentage	90	25	22	20	26	22	19	13							21						
Retarded:																					
Number			275	310	446	483	533	608	583	446	213	76	15	7	3,995						
Percentage			22	25	32	35	42	55	71	100	100	100	100	100	37						

Section 6. THE COURSE OF STUDY IN TOWNS AND CITIES OF SOUTH DAKOTA.

Legal requirements and the course of study.—The subjects taught and the special activities or special days and events observed or commemorated in the towns and cities are regulated by statute. Chapter 214 of the session laws of 1917 (see sec. 138 of the Laws of South Dakota) specifies that instruction shall be given in the common schools of the State in the following branches in the several grades in which each may be required:

> Reading, orthography, arithmetic, geography, primary language and English grammar, history of the United States, history of South Dakota, physiology and hygiene, with special instruction as to the nature of alcoholic drinks and narcotics in their effect upon the human system, civil government, and drawing, and such other branches, including high-school subjects, as the electors of the district at the annual election may have ordered.

This general provision is added to by various enactments whereby the elements of vocal music, including, when practical, singing of simple music by rote, shall be taught.

> Moral instruction intended to impress upon the mind of the pupils the importance of truthfulness, temperance, purity, public spirit, and respect for honest labor, obedience to parents, and due deference to old age shall be given by every teacher in public service in the State.
>
> There shall be taught in the public schools of this State, in addition to other branches of study as now prescribed, a system of humane treatment of animals.

It is also provided that the proper officers are authorized and empowered in their discretion to appropriate funds for the purpose of defraying the necessary expense of a proper observance of Memorial Day each year.

The law also requires that on September 28, or on the school day in each year thereafter nearest that date, Frances Willard Day shall be observed in the different public schools of the State, one-quarter of the school day being set apart for instruction and appropriate exercises in patriotism, civic improvement, the history and benefits of the prohibitory amendment to the constitution, the prohibitory laws of the State of South Dakota.

An opinion of the attorney general, report of 1916, page 305, holds that the board of education has authority to provide for instruction in manual training and domestic science; also to prescribe a course of study. Chapter 225 of the Laws of 1917 provides that the board of education in each city constituting a municipal corporation of the first or second class, in addition to the inherent and other powers now vested in such board, shall have power to establish and maintain a uniform system of instruction in the grades to and including the eighth, in substantial conformity to the course of study adopted for the public schools of the State, to establish and maintain kindergarten departments, courses in physical training, courses of study and practice in vocational training.

Observations on the course of study.—The courses of study in use in the towns and cities of South Dakota were investigated in light of the legal provisions and requirements above set forth. In the 22 towns below 2,000 population, but three reported any course of study directions in use other than those provided in the State course of study. One of these merely issued three pages of typewritten directions in language and grammar. Another city reported a total of six typewritten pages supplementing the State course of study, one page being devoted to reading and literature, one to language and grammar, one to arithmetic, one to geography, and two to history. A third town reported a course of study in addition to the State course, consisting of 60 typewritten pages.

In the 15 cities above 2,000 population, seven reported course of study directions in addition to the State course of study. With one exception, however, this material was all issued in typewritten form. In cities 1, 4, 7, 10, 13, the typewritten material was organized by grades. In cities 2 and 9, the organization was by subjects.

The following comments by cities are descriptive of the course of study situation in these places:

City No. 1 issued extensive mimeographed outlines providing reference helps for pupils and teachers and indicating text omissions and text enrichments. Objective standards were suggested only in the subject of writing. There was evidence in this course of study that the teachers had participated rather liberally in the development of the details.

In city No. 2 complete mimeographed outlines in all subjects were provided. It was found, however, that a complete set of outlines was not furnished to each teacher, there being but one complete set for a building. Each teacher was furnished only with the outlines for the subjects taught by her. These outlines provided ample reference in the various subjects for pupils and teachers. In the examination of these outlines at the superintendent's office the following notes were made: In reading, each child is encouraged to read extensively, and an ample amount of material is supplied that he may be able to read very largely what he likes. In arithmetic the addition combinations to 10 were to be taught in the first grade. Omissions of obsolete material in arithmetic were not very liberally specified, although the language of the directions gives teachers freedom to make omissions according to their judgment. The geography course of study placed large emphasis on using such means as picture illustrations, construction, and so on, as a means of rendering the work concrete. The language course of study gave detailed directions in reference to a wide use of stories, but specified the use of the book rather extensively. There was little formal grammar before the seventh grade, but after that large quantities of material now considered functionless were required to be taught. The physiology and hygiene outline was excellent, emphasis being directed to producing action and forming habits rather than to the mere teaching of facts to be remembered. The industrial and fine arts outline was quite detailed for the first seven grades. The art outline provided for picture study. The aim of the industrial arts outline was to enable the children to know how the world's work is done.

There were committees of three or more to give attention to the course of study in each of the following subjects: Reading, language, geography, arithmetic, physiology, history and civics, nature study and school gardens, music, drawing. The bulletin announcing these committees suggests they should meet about once in two weeks. The plan of working was the gathering of data in reference to actual practice and the gathering of sources of inspiration and guidance. Special emphasis was placed upon the study of courses of study and practices in other systems. Such books as the committees might need access to were to be provided by the board of education.

With provision made for working cooperatively, it was surprising to find so little evidence of motives for work, methods of teaching, results expected, illustrations of results secured. While not operative as yet, the superintendent assured me that standard scales for the measurement of results secured were coming more and more into use and that he was hoping to be able to indicate the results expected in spelling, writing, arithmetic, and reading in terms of objective standards.

In city No. 4 courses were available in reading and literature amounting to 10 pages, in writing amounting to one page, in history amounting to one page, and in nature study amounting to two pages. Within these limits it is evident that there was merely space to indicate the text to be used and the scope to be covered.

In city No. 7, while the typewritten course was brief, it was good in the reference list if supplied for the use of teachers and pupils.

The course of study in the other three cities merely specified the books to be used and the limits to be covered. In their reports regarding their practice two superintendents indicated that the course of study is supplemented monthly by outlines. In so far as access was had to any of these outlines they merely indicated any modifications from the regular course of study in the pages or chapters to be covered.

It is evident from the foregoing description of the courses of study in use that the work in the towns and cities of South Dakota is for all practical purposes directed by the State course of study, which was prepared with the thought of giving such general directions as might be followed by all schools of all types in carrying out the provisions of the law regarding what should be taught in the public schools of South Dakota. Owing to the small size of the towns under 2,000 population and of many of those above 2,000 population, it may be that the expense of printing a course of study based upon the State course of study but adapted to the particular needs of the community served is too great. If that be true, it would seem that local initiative in supplementing the course of study might be greatly encouraged if the State course were issued especially for the use of towns and cities in loose-leaf form, so that detailed additions to the work suggested might easily be made. Much help could be brought to teachers if a page could be inserted wherever necessary supplying sources of help which should be made available to teachers and pupils, lesson outlines for the guidance of the teachers, illustrations of results expected for the guidance of the teachers, method suggestions and games and devices for the guidance of the teachers, ways of motivating work for the teacher's assistance, problem procedure in teaching, socialized possibilities for the assistance and guidance of the teachers. This same form of issue would make it possible for a superintendent, as standard tests are applied to the results secured, to issue tentative objective standards to be inserted in the course of study for the guidance of teachers in the various grades and subjects.

In view of the above facts showing that the State course of study is essentially the guide in the work of instruction in the towns and cities of South Dakota, all of the criticisms and suggestions for improvement of the State course of study indicated elsewhere apply here. Further, in towns and cities more intimate adaptations to the peculiar needs of communities should be expected. These communities pay salaries enabling them to secure leadership capable of diagnosing community needs and of establishing ways and means of meeting them. Also, where larger numbers of pupils are congregated, as in towns and cities, differentiations to suit the needs of special abilities and to meet the vocational needs are economically possible to an extent that does not obtain in rural communities served by one-room schools. Actually, therefore, the suggestions for improving the State course of study could not be considered detailed and searching enough to supply all the criticisms and suggestions which should be made for the improvement of the course of study in towns and cities.

Section 7. SOCIALIZING THE SCHOOLS IN THE TOWNS AND CITIES OF SOUTH DAKOTA.

Socialization of schools defined.—The large objective in progressive modern education evidently is the socialization of the school. While it is becoming rather common for educators and teachers to state this as the object of their endeavors, there is not an overwhelming uniformity as to their meaning. It may be well, therefore, to raise the question as to what a socialized school or school system is. A person of ordinary intelligence knows when a railway is electrified, he knows the essentials of a modern house, he knows something about when a suit of clothes is in style; but the question as to what we mean by a socialized school or as to when a school is socialized needs a detailed and concrete answer, that the public which supports the public-school system may definitely understand the answer when they are told that we are endeavoring to improve the public schools by socializing them more adequately.

For the purpose of this discussion a socialized school is an institution so organized that its work and activities and methods of procedure are such that the result is immediately and directly a functional product. In other words, the pupil of a school so equipped should be able to enter upon the customary social and civic relationships. He should be able to share in the ordinary occupations of the working world, and satisfactorily discharge the duties which fall to him.

The progress which has been made in the towns and cities of South Dakota in socializing the schools can only be discussed briefly because of the limits of this survey. The discussion is presented under the proper heads in setting forth the essentials of a socialized school. Briefly stated, these essentials are as follows: Right objectives, appropriate subject matter in each of the school subjects, proper standards of discipline and control and of attainment in work, appropriate methods of teaching and management, satisfactory results.

The objectives of the socialized school.—The first essential of a socialized school is a body of objectives for its guidance which, if realized in its children, will fit them for successful social service. Everything that is done in planning all the details of a school must find its justification in the effort of the school to realize the objectives set up. The socialized school accepts as its general objective the training of the oncoming citizens for social efficiency. What this involves may perhaps be most adequately presented in a brief space in the following table:

TABLE 74.—*Social efficiency: The objective of modern education.*

Phases of efficiency.	Ingredients essential to social efficiency.			Planes of efficiency.		
	Knowledge.	Habits and skills.	Attitudes.	Ability to maintain one's self regardless of how it affects others.	Ability to maintain one's self and not interfere with welfare of others.	Ability to maintain one's self and aid progress of others.
1. Vital: Health and physical development						
2. Vocational: Agricultural, industrial, commercial, professional, and domestic						
3. Avocational: Right use of individual and social leisure						
4. Civic: American and world citizenship						
5. Moral: Morality and religion, including social service						

As the above table shows, involved in the large objective of the school's work are five phases of efficiency—health or vital, vocational, avocational or leisure, civic, moral, and religious. These descriptive terms are so concrete that detailed explanation is unnecessary.

Concrete and satisfactory programs for the development of each of these phases of efficiency must be established in light of the ingredients entering into each of them. These the table shows to be knowledge, habits and skills, and attitudes. Further discussion as to the content of this terminology is unnecessary.

Not only must we strive earnestly to provide for all phases of the child's efficiency and for the ingredients essential to efficiency, but educators generally must be guided in reference to the thoroughness and efficiency of their work by a knowledge of the different planes of efficiency on which oncoming citizens may stop in their development. Manifestly, the ideal which should guide education is to raise every citizen possible to the highest plane of efficiency.

The basis for measuring the extent to which the guiding objectives in the schools of South Dakota meet the requirements of the objectives of the socialized school is the data gathered from the State course of study, the outlines issued in certain towns and cities to supplement the State course of study, and the bulletins issued by the superintendents of schools and the supervisory staffs in directing the execution of the course of study. The State course of study implies the aims or objectives in teaching the various subjects to a greater extent than it states them specifically, although this course compares favorably with the average course of study in its attention to defining aims and objectives in the subjects of geography, arithmetic, language and grammar, and physiology and hygiene. No course of study as yet has attempted to show with reference to each subject just what its teaching should contribute to the establishment of each phase of efficiency—vital, vocational, avocational, civic, moral, and religious; nor has any course of study yet attempted to indicate just what knowledge, just what habits and skills, and just what attitudes should result from the teaching of each subject in the curriculum. Evidently, a more exact definition of the phases of efficiency to be ministered to through teaching and of the ingredients to be established is desirable.

The State course of study in physiology and hygiene is a fairly satisfactory model from the standpoint of stated aims in teaching of what all courses of study should do. Even it, however, is not sufficiently detailed and specific. Preceding the directions for the work of each year, however, the aim is indicated. The following sentences will illustrate: The aim in the work of the fourth year is—

> to strengthen the child in habits of right living; to make him act automatically in the matter of caring for himself; and to give him understanding, in so far as he is capable of knowing, about the necessity of precaution in every case of danger; to correlate the work in this subject with the work in every other subject in such way that there may be no sharp distinctions.

The aim of the sixth year work is—

> to have the pupil get an idea of some of the laws of nature that help to maintain health.

The aim of the eighth year work is—

> to fix definitely in the mind of the pupil the real value of a sound body and a sound mind. The pupil should be taught that good health is the best thing in the world; that his success in life will depend largely upon his ability to do his part of the world's work, and that his ability to do his part will depend entirely upon his physical and mental fitness.

The aims as stated are not quoted in full, but the sentences quoted are illustrative of the definiteness with which the aims in the teaching of physiology and hygiene are indicated.

The failure of a course of study to state aims adequately may be somewhat satisfactorily atoned for if the concrete results expected are fully illustrated. In this respect, however, the State course of study is lacking. It does this most adequately in the subjects of arithmetic and language and grammar. Even in those subjects, however, the results expected should be detailed much more fully, and illustrations easily understood by the average teacher should be provided.

The failure of a course of study to indicate aims and objectives in accordance with the terminology employed in the table above may be fairly adequately met by indicating objective standards, such as the application of the standard tests in arithmetic, writing, spelling, geography, language, and silent reading has made it possible to establish. The limitation in relying upon the indication of objective standards is that they are not available for all the subjects and are not applicable to all phases of the subject matter in any subject, nor to all of the outcomes essential to social efficiency. The State course of study, however, has not supplemented its failure to state aims and objectives adequately by the indication of objective standards. Only one city reports having supplemented the State course of study by indicating objective standards as a guide to its teachers. Undoubtedly, however, in the immediate future, as the result of the initiative on the part of superintendents and teachers and as the result of the cooperative research work done by the Northern Normal and Industrial School, tentative objective standards will be available in many of the towns and cities for the guidance of teachers in their work.

The subject matter of the socialized school.—The second essential of the socialized school is an appropriate body of subject matter and an appropriate body of opportunities and activities through which the objectives of the school may be realized. Many careful and extended studies of the last two years have made it clear that only those materials which have large value in relation to the outcomes sought through education should be retained in the curriculum. The criticisms of the content of the State course of study appearing elsewhere apply here, and need not be repeated.

It can not be considered, however, that satisfactory progress has been made in the socialization of the curriculum for the towns and cities of South Dakota until all obsolete, functionless subject matter has been eliminated therefrom, nor until such enrichments of the curriculum have been made as modern progress in all fields of knowledge make possible. The various studies (particularly those in Part I of the fourteenth, sixteenth, and seventeenth yearbooks of the National Society for the Study of Education, being the reports of the National Education Association Committee on Economy of Time pertaining to minimal essentials in the elementary school subjects) are available as guides in determining the subject matter which should be taught in the various elementary school subjects. It can not be considered that any final studies have been made, but no course of study which is not formulated with due regard for the recommendations in the efforts above referred to—to formulate minimal essentials—can properly be considered to be socialized to the extent even that is possible with present knowledge.

From the standpoint of desirable differentiations in the upper grades, the curriculum in the towns and cities of South Dakota is hardly satisfactory. As was pointed out elsewhere, no community can properly be said to have a junior high school. The opportunities offered, with slight exceptions, in three cities to the pupils in the upper grades are the traditional seventh and eighth grade course of study in use in all schools throughout the United States.

Provision should be made for enabling the pupils of these grades to elect work in keeping not only with their abilities and dominant interests, but in keeping with their immediate educational and vocational intentions. In view of the varying differences in children, provision is not made adequately by the traditional uniform course of study.

The standards of the socialized school.—The third essential of the socialized school is the standards needed for guidance in all the details of the school. These standards are of three kinds, at least: (1) Those pertaining to discipline; (2) those pertaining to equipment; and (3) those pertaining to attainment in work.

The standards of discipline to be maintained and the methods by which they are to be enforced are not discussed in the State course of study, nor in any of the bulletins of any of the superintendents included in this study. These standards can only be judged, therefore, upon the basis of the schools visited. Of the 107 teachers seen at work in their classrooms by the observer, there were but five cases of poor discipline, in which the school was "running riot." In the other schools there was what is called "good order." The pupils were quiet and were busy about their work. The number of schools visited, however, in which there was evident freedom and naturalness on the part of the pupils was small. Predominantly, the children were holding their hands or in other ways securing the permission of the teacher to do common, ordinary things which they ought to be trained to do without interfering with the teacher's other duties, such as passing to the dictionary, passing to the wastebasket, consulting the library, consulting the atlas or wall map, and so on. A school could hardly be considered to have progressed very far in the matter of establishing freedom and independence and self-control in which the teacher stands guard, applying to every act of every child the standard which she has set to be maintained.

In the matter of equipment standards, the observer was unable to secure from any superintendent a standard list by which equipment was supplied to the schoolrooms of any grade or to buildings of any size or to schools of any particular type. As a guide to teachers and principals in making requisition for materials needed, a standard equipment list should be developed. The following standard building equipment list in use in a certain city will illustrate the meaning intended here:

STANDARD BUILDING EQUIPMENT.

Building.

Set of relief maps:
- *a*. World (4 A, 7 A).
- *b*. United States—2 (4 A, 6 B).
- *c*. North America (3 A, 4 B, 5 B, 6 B).
- *d*. Europe—2.
- *e*. South America (4 A, 6 A).
- *f*. Kansas (3d, 6 B).
- *g*. Asia (4 A, 7 B).
- *h*. Africa (7 A).
- *i*. North America—physical.
- *j*. South America.
- *k*. Europe—physical.

Balances (scales).
Reference books—New educational reference work.
Unabridged dictionary, to be kept in highest grade room.
Foster's history chart.
Globe.
Hectograph.
Paper cutter.
Pencil sharpener.
Printing outfit.
Sand table for each floor.
Scissors—2 sets.

Grades.

First: Kindergarten chairs, pair of large scissors, sand table.
Second: Pair of large scissors.
Fourth: Academic dictionary.
Fifth: Academic dictionary.
Sixth: Collegiate dictionary.
Seventh: Collegiate dictionary.
Eighth: Government map of Territorial divisions.

As was pointed out in the discussion of the course of study, the attainment expected in work is not specified in the towns and cities of South Dakota in terms of objective standards, nor are concrete illustrations given of the type of results which teachers are expected to secure from grade to grade in the various subjects.

Methods of managing and teaching the socialized school.—The fourth essential in the socialized school is appropriate methods of managing and teaching. In the matter of management, the business world has thoroughly demonstrated that the keynote in any enterprise promising success is cooperation. The most progressive school systems generally have likewise come to this point of view and are modifying their attack accordingly. There is no longer any place for the "know it all," the autocrat, or the martinet in education any more than in business or government. In all of the school's problems or undertakings the cooperative attack must be employed.

The extent to which superintendents and principals in the towns and cities of South Dakota work from this standpoint was only to be gathered from the reports regarding meetings held and from personal conferences with them. As was noted in the discussion of the course of study, the teachers participated in the development of these courses in at least three towns and cities studied. There was internal evidence that they had made contributions in two other cities. The following notes left with the teacher following the superintendent's visit evidence a proper cooperative relation.

QUESTIONS ON THE ASSIGNMENT.

1. Am I careful in my assignments to state very definitely just what is to be done, and how?

2. Are my assignments made orally or written on the blackboard so that a misunderstanding is impossible?
3. Is a misunderstanding of the assignment ever allowed to pass as an excuse for not having the lesson?
4. Do I outline the next lesson, showing the main things to be noted, or is the pupil's first introduction to each lesson obtained from his own study of the textbook?
5. Is my assignment of the next lesson made by topic or by pages?
6. Do my assignments to supplementary reading state the book, the chapters, the pages, or is a topic given, leaving pupils to find it where they can?
7. Do I prepare the advance lesson before it is assigned?
8. Do I assign merely the amount to be studied for the next lesson, or do I show the pupils how to study it?

QUESTIONS ON THE TEACHER'S PREPARATION.

1. Do I outline the thought of the text on paper as I study it?
2. Does anything short of a complete understanding of the topic satisfy me?
3. Do I make use of (1) the reason, (2) hearing, and (3) sight to fix the idea in my mind?
4. Do I stop to think out illustrations and examples as I study?
5. Do I swallow whole what I read or do I insist upon evidence and proof?
6. Do I study while I study, or merely "spend time on my lesson?"
7. Do I study a subject from the point of view of teaching it?
8. Do I study, knit, talk, and eat peanuts at the same time?
9. Do I take time to think over and digest what I have studied?

The responses of teachers, principals, and superintendents in reference to cooperative relations with the public are indicative of good attack from this standpoint. The following table shows the cooperative activities, together with the distribution of the same, as reported by 593 elementary school-teachers in the towns and cities of South Dakota:

TABLE 75.—*Cooperative activities in 593 elementary schools in South Dakota towns and cities.*

Type of activities in which schools cooperated with the community.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Junior Red Cross organization	141	53	194
Food conservation	143	37	180
Thrift stamps and baby bonds	60	28	88
Gardens	63	9	72
Donations to Red Cross	33	....	33
Red Cross work	146	80	226
Sold Red Cross Christmas seals	48	27	75
Assisted in Y. M. C. A. drive or contributed	24	3	27
Red Cross members	25	....	25
Contributions to relief funds	17	1	18
Less candy, etc	3	3	6
Soldiers' library fund	7	....	7
Y. W. C. A. contributions	3	....	3
Assisted Liberty loan drive	4	....	4
Temperance	11	1	12
Own Liberty bonds	17	8	25
Subscription to local funds	15	....	15
Clean-up work	67	16	83
Tagged shovels	14	7	21
Nothing	4	5	9
Not reporting	26	12	38
	671	290	1,161

One superintendent reports the following community activities aided by the schools: Adult Red Cross work (participated in by teachers and pupils), Junior Red Cross auxiliaries, elaborate program furnished for municipal Christmas tree, high-school boys were enlisted in farm work, everything possible was done to further the food-conservation propaganda, thrift stamps, baby bonds, and Liberty bonds were sold through the schools, "Tag your shovel day" was observed, flower and vegetable gardens were planted throughout the community by the pupils, vacant lots were cleaned of rubbish and cultivated. Doubtless this report duplicates certain items reported by the teachers from the city concerned in the table quoted above, but the list of undertakings in which the schools have cooperated with the community is presented as typical.

Evidence of the socialization of the methods of teaching and conducting the school activities of the children was altogether too limited. Too generally the school work visited evidenced that the children had studied paragraphs, pages, and chapters in their textbooks and were reciting them to the teacher rather than discussing them and sharing them with each other. For illustration, the observer listened to a 25-minute language lesson in a fifth grade in which the children attempted to define and illustrate and otherwise talk learnedly about monosyllables, dissyllables, trisyllables, and polysyllables. When the lesson had finished two or three of the brighter pupils understood intellectually what they had been talking about. Of course, even that mastery would soon pass, as the pupils would find the information of absolutely no practical use and therefore would have no occasion to employ it as would be necessary to fix it in memory.

In the matter of spelling also, although the common ordinary words in the examination papers and composition papers were found to be misspelled, in schoolroom after schoolroom the children were trying to acquire the spelling of such words as the following, taken from a fifth-grade assignment: Demeanor, Phrixus, Colchis, devour, execrable, infancy, bug-bear, delectable, Aetes, potentate, dethrone, obeisance, chiron, propriety, execute, solicit, rejoin, vulcan. In the seventh grade the children were not only to master the spelling of the following list but were to be able to write each word and mark it correctly diacritically during the spelling lesson: Authentic, ominous, vicissitude, venerable, maimed, current, commodities, farthing, species, tankards, billion, buccaneers.

In only 11 classes did the children talk with and to each other, asking questions of each other, differing with each other, and offering additional information on the topic or subject the child leading the discussion had reported upon. In two of these schools the children had a variety of books at their disposal and were discussing a topic pertaining to the coal famine, which prevailed at that time, with considerable naturalness and ease. In seven lower-grade classes the children were engaged in playing games with naturalness and enthusiasm, being employed in the teaching of phonetics, spelling, and good usage of language.

The reports from teachers show that there was some attention given to combining rooms as a means of enabling one class to share its good work with one or more other classes. The following table shows the distribution of this tendency:

TABLE 76.

Rooms combined in school work.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Regularly	167	49	216
Not at all	56	40	96
Occasionally	120	44	164
Not reported	84	33	117
	427	166	593

The following table shows the types of program activities participated in by the rooms and the teachers of the towns and cities reporting:

TABLE 77.—*Types of program activities.*

Types of program activities participated in by rooms.	Teachers in cities of 2,000 population or over.	Teachers in cities having a population of from 1,000 to 2,000.	Total.
Special day programs	205	52	257
Red Cross	17	21	38
Music	4	4	8
Exhibits		2	2
Public entertainments	100	29	129
Parents meetings	107	6	113
Regular assemblies	18	1	19
Reporting none	37	13	50
Not reporting	29	48	77
	517	176	693

One city supplied the observer with a number of programs which had been prepared for the purpose of enabling all of the grades participating to share with each other their good work. The following typical program is quoted as illustrative of the type of thing which should become more common:

OPENING PROGRAM.

Patriotic song	School.
Rhythms and games	Kindergarten.
Slumber song Boating song	Girls' chorus.
Danish dance of greeting	First-grade girls.
Halloween song	Seventh grade.
Washing the clothes Reap the flax	Intermediate grades.
Halloween parade	First-grade boys.
Sailor song	Boys' chorus.
Halloween	Second grade.
The story of a seed	Third and fourth grades.
Story of the Boston Tea Party	Doris Willard.

Boston Tea Party.

(Characters listed with names of pupils taking part.)

The Star Spangled Banner	School.

The following program was supplied by one of the smaller towns reporting:

Folk Dances.

First grade, 1. Bohemian; 2. Children's Polka	Miss Mangan.
Second grade, Bleking	Miss Waugh.
Third grade, Bouree	Miss Krause.
Fourth grade, Ace of Diamonds	Miss Curry.
Fifth Grade, Rustic Reel	Miss Spensley.
Sixth and seventh grades, Maypole Dance	Miss Mangan.
Song, "Old Glory"	Chorus.

National Songs and Living Pictures.

1. America, "The Melting Pot"	Miss Waugh.
2. "Dixie"	Miss Waugh.
3. "Columbia, the Gem of the Ocean"	Miss Waugh.
4. "When Johnny Comes Marching Home Again"	Miss Waugh.
5. "Yankee Doodle"	Miss Curry.
6. "The Girl I Left Behind Me"	Mrs. Scott.
7. "Hail Columbia"	Mrs. Scott
8 "The Star Spangled Banner"	Mrs. Scott.

It should be remarked that recently erected buildings in at least five cities provide special facilities for promoting meetings of the entire school in assembly exercises. Evidently, teachers and principals have not had sufficient training in their normal school and university courses to show them the value of making use of these provisions and to equip them in ways of making profitable use of such facilities. Reports indicate that five superintendents are particularly anxious to provide facilities and equipment and in other ways encourage the social meetings of the school as well as encourage the use of the school by the patrons and by civic organizations.

Measuring results of school activities.—The fifth essential of the socialized school is the securing of results which approximate the ends set up for realization. The administrative plans must provide for the regular, systematic, and scientific checking of the results which the schools are producing. This aspect of the work is not thoroughly provided for in any town or city school system in South Dakota. However, superintendents and principals are to be commended for their endeavors to cooperate with agencies in the university or normal schools which seek to evaluate the results secured through the application of standard tests.

CONCLUSIONS AND RECOMMENDATIONS.

1. The law should provide for the responsible participation of the superintendent of schools in the making of the annual report, "financial as well as educational, of all of the schools." This report is now made by the clerk.
2. In accordance with modern practice, higher qualifications than are now required under the law should be enforced upon persons aspiring to be superintendents of town and city schools. In South Dakota, in addition to successful experience, the A. B. degree or its equivalent should be required.
3. The compulsory education law should be strengthened so that if a child is instructed outside of a public school, the persons instructing shall possess qualifications equivalent to those required of teachers in the public schools.
4. All boards of education should transact their business without committees, except as special and temporary committees may be appointed to do specific pieces of work.
5. It would make for dignity and efficiency in the transaction of educational business if all boards were required to provide a public school office for the superintendents of schools and transact all school business there.
6. The law should define elementary schools (grades 1 to 6), intermediate (junior high) schools, and secondary schools (senior high), and provide for encouraging the development of intermediate schools.
7. Unless the provision of the law that all school-building plans shall be approved by the State superintendent's office will effectually reach the improvements needed in school plants, the law should specify lighting, ventilating, seating, gymnasium, auditorium, and fire-protection standards.
8. The law should definitely encourage the provision of educational and recreational advantages during the vacation season.

9. A law should be enacted requiring all boards of education to file with the State superintendent a copy of the printed rules and regulations governing the schools they control.

10. Provision should be made to insure the use of standard report and record forms, including the use of cumulative record cards in keeping the records of pupils.

11. The State course of study should be issued to towns and cities in such form as to encourage local initiative in modifying it to adopt it to local needs.

12. There should be State legislation regulating the minimum salaries teachers may be paid. Advancement in equipment up to a good standard should be compulsory and should be rewarded by annual salary increments.

13. Provision should be made through State and, perhaps, local communities to provide special facilities (1) for helping retarded children and for preventing retardation, and (2) for giving proper education to atypical children. If necessary, superintendents should be required to make a report annually showing pupil distribution by ages and grades that the extent of retardation, normality, and acceleration may be studied at least once a year.

Chapter XVI.

THE HIGH-SCHOOL SYSTEM.

Section 1. THE PROBLEMS OF THE HIGH SCHOOLS OF SOUTH DAKOTA.

The high schools of South Dakota are for the most part small, with few pupils and few teachers. They are widely scattered, but the great majority lie in the eastern third of the State. They are not recognized in the State law, so far as the distribution of funds is concerned. There is no high-school inspector. There are conflicting laws regarding the certification of teachers, forgotten clauses concerning the content of the program of studies, provision for some types of high schools that do not even exist.

That the present system of high-school instruction is not all that it should be is indicated in the following array of facts, favorable and unfavorable:

(1) *South Dakota has a smaller per cent of its possible high-school pupils enrolled in high school than any other State in the north central or western group, New Mexico alone excepted.*—If a person takes the data for 1915, determines the number of children in the States 15 to 19 years of age, finds the per cent of the total population enrolled in public high schools, and then finds the ratio of this per cent to the number 15 to 19 years of age, he arrives at the per cent of those enrolled of those 15 to 19, which may be assumed as a fair measure of those who might be enrolled. If it excludes those under 15 who may be in high school, it includes many over 17 who have graduated. The facts are given in the following table.

TABLE 78.—*Per cent of population in high schools, North Central and Western States.*

States.	Per cent of total population enrolled in public secondary schools.	Per cent of total population between the ages of 15 and 19, inclusive.	Per cent of population 15 to 19 enrolled in public secondary schools.
California	2.39	8.2	29.1
Oregon	2.07	9.0	23.0
Kansas	2.26	10.1	22.7
Washington	1.86	8.7	21.4
Iowa	2.16	10.2	21.2
Nebraska	2.18	10.4	20.9
Colorado	1.73	8.9	19.4
Utah	1.92	10.0	19.2
Indiana	1.94	10.2	19.0
Michigan	1.78	9.6	18.5
Idaho	1.71	9.3	18.3
Minnesota	1.74	9.7	17.9
Nevada	1.14	6.4	17.8
Montana	1.36	7.9	17.7
Ohio	1.64	9.8	16.7
Wisconsin	1.64	10.1	16.2
Illinois	1.40	9.5	14.7
Wyoming	1.10	7.9	14.0
Missouri	1.33	10.5	13.1
Arizona	1.07	8.5	12.6
North Dakota	1.23	9.8	12.5
South Dakota	*1.24*	*10.0*	*12.4*
New Mexico	.69	9.9	7.0

(2) *South Dakota stands well in the number of schools and of teachers.*—In 1916 South Dakota had one high school for every 3,290 people in the State, and one high-school teacher for every 970 people. The comparison with certain States is as follows:

TABLE 79.—*South Dakota and other States compared as to schools and teachers.*

States.	Number of schools in 1916.	Number of teachers in 1916.	Population in 1910.	Population—	
				Per school.	Per teacher.
Nebraska	423	1,596	1,192,214	2,810	750
Iowa	606	2,891	2,224,771	3,660	770
Kansas	450	2,094	1,696,949	3,760	810
Minnesota	279	2,288	2,075,708	7,440	907
North Dakota	173	629	577,056	3,330	915
Indiana	598	2,901	2,700,876	4,500	930
South Dakota	*177*	*601*	*583,888*	*3,290*	*970*
Wisconsin	312	2,224	2,333,860	7,460	1,040
Michigan	410	2,602	2,810,173	6,890	1,070
Ohio	798	4,176	4,767,121	5,970	1,140
Missouri	512	2,240	3,293,335	6,440	1,470

(3) *South Dakota has more square miles per public high school than any other State in the north central group.*—This, of course, means that while there is no great difference in the number of schools per unit of population, there is a large problem in regard to the size of the State and the sparseness of population. This emphasizes the problems of centralization of control, of inspection, and supervision.

TABLE 80.—*Square miles per high school, North Central States.*

	High schools.[1]	Area of State (sq. miles).	Square miles per high school.
Ohio	798	41,040	51
Indiana	598	36,354	61
Illinois	658	56,665	86
Michigan	410	57,980	141
Wisconsin	312	56,066	180
Minnesota	279	84,682	304
Iowa	606	56,147	94
Missouri	512	69,420	136
North Dakota	173	70,837	409
South Dakota	*177*	*77,417*	*437*
Nebraska	423	77,520	183
Kansas	450	82,158	166

[1] Number of schools reporting to Bureau of Education in 1915–16.

The study which follows will take up a few of the problems which these small, scattered, and poorly attended high schools are forced to meet. In general the problems are those which pertain to all the schools, not to a few; and they will be treated from the point of view of the State as a whole. These are (1) the problem of the program of studies, (2) the problem of adequate supervision, (3) the problem of State aid, (4) the problem of a proper teaching force, (5) the problem of economy in time of war, and (6) the problem of equalization of opportunity. In certain features each individual school will be compared with others.

Section 2. THE PROBLEM OF THE PROGRAM OF STUDIES.

So far as the State law is concerned the high schools of South Dakota are left practically free in their choice of subject matter. There is one clause in the law which prescribes that schools must teach the humane treatment of animals and that no experiments upon live animals may be tried in schools. Moral instruction is also required in every school in the State; this instruction to be given in truthfulness, temperance, purity, public spirit, patriotism, respect for honest labor, obedience to parents, and due deference to old age. Physiology and hygiene must also be taught with special reference to alcohol and narcotics, "as thoroughly as arithmetic and geography." All further regulation of the program of studies comes from the power given to the State superintendent of public instruction of inspecting all high schools and accrediting them to institutions of higher learning. This means that the State superintendent has the power to say to a school that a certain subject shall or shall not be taught at a given time. The school may obey or not as it sees fit, the penalty for failure to comply being the removal of the school's name from the accredited list, with the loss of prestige that goes with it. Only 86 out of 200 schools were accredited in 1916–17.

The regulations for the program of studies for the accredited high schools are as follows:

Constants: The constants or required subjects of an approved high-school course shall be—

	Units.
English I, II, and IV as defined in the high-school manual	3
American history and government	1
Algebra, to quadratics	1
Plane geometry	1
Science, one year's work in any of the following: (1) Physics, (2) chemistry, (3) botany, (4) zoology, (5) physiography	1

Electives: The electives of the course shall be—

Latin	4	Physiology	½
German	4	General science	½
French	2	Advanced algebra	½
English III	1	Solid geometry	½
Ancient history	1	Trigonometry	½
Mediæval and modern history	1	Physical training	[2] ¼
English history	1	Public speaking	[1] ½
Economics	½	Vocal music	[2] ¼
Physics	1	Manual training	(2)
Chemistry	1	Domestic science	(2)
Botany	1	Agriculture	(2)
Zoology	1	Commercial branches	(2)
Physiography	1	Pedagogy	(2)

A one-year high school shall offer English I, elementary algebra, and two electives; a two-year school shall offer English I and II, algebra, and geometry, and four electives; a three-year school shall offer six constants, including those offered for the two-year schools; while a four-year accredited school shall offer all of the constants and not less than eight of the electives. Credit will not be allowed for American history and government, physics, chemistry, or trigonometry if given before the third year of the course, nor for economics if offered before the fourth year.

What an effective high-school program should offer.—An efficient high-school program of studies should give to every pupil a maximum of knowledge and training which will be of real service in the life that he is to lead. This implies at least three points of emphasis. The pupil must be trained to earn a living, so that he will not be economically dependent upon his graduation from school. The pupil must be a good member of society, which implies that he must have good health, must be a loyal, patriotic, and public-spirited citizen, that he must be moral and upright, and that he must be able rationally to make good use of his leisure period. The pupil must have the most for his time in school. The program of studies must be adapted to the needs of the boy or girl who is going to drop out, quite as well as to the needs of the graduates. There are therefore at least three elements which a well-worked-out course of study should provide for: (1) Vocational direction, (2) cultural training, and (3) provision for those who drop out.

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[1] In a four-year school only.

[2] As defined in high-school manual.

If a high school were equipped with a large teaching force and with boys and girls, all of whom were going into the same profession and all of whom were to remain in school full four years, it would be quite possible to have an efficient program of studies. This, however, is not possible in the high schools of South Dakota. Pupils are dropping out all along the four years of the course. A wide variety of occupations are followed by the graduates of these schools. Few teachers and narrow lines of work are the rule. The efficient program of studies for this State will therefore be the best compromise between the three elements, probable stay in school, probable occupation of the pupils, and the ability and capacity of the teachers to do the needed work.

The size of the schools of South Dakota, with their importance as shown by the number of teachers employed and the number of pupils attending, is given in the following table:

TABLE 81.—*Size of the schools in South Dakota.*

Number of teachers.	Number of schools employing.	Percentage of schools.	Cumulative percentage.[1]	Number of pupils attending these schools.	Percentage of pupils.	Cumulative percentage.[1]
		Per cent.	*Per cent.*		*Per cent.*	*Per cent.*
1	22	14	14	252	2.5	2.5
2	42	27	41	991	11.0	13.5
3	34	21	62	1,436	15.5	29.0
4	17	11	73	975	10.5	49.5
5	11	7	80	648	7.5	47.0
1-5	126	80	80	4,302	47.0	47.0
6-10	21	13	93	2,157	23.0	70.0
11-15	6	4	97	1,206	13.0	83.0
16-20	2	1	98	692	7.5	90.5
21-25	1	1	99	328	3.5	94.0
26-30	1	1	100	562	6.0	100.0

[1] Includes all given above each number.

These data are very significant when considering the possibilities of the program of studies. Nearly one-third of the high-school pupils in nearly two-thirds of the schools have but three teachers, including the principal, to instruct them. Four-fifths of the schools instruct nearly one-half of the pupils of the State with a teaching staff of five teachers or less, including the principal.

The possibilities for real vocational training.—It is generally recognized that real training calculated to provide efficiency in a particular vocation is no easy task for the school. The Smith-Hughes Act and its administration by the Federal board have shown that a great amount of practical experience in the work in question under shop or farm or home conditions is necessary to this training. The numerous rules and regulations that are being laid down show that it takes special training upon the part of the teacher, a special attitude upon the part of the school, special equipment, and much time. Vocational education is quite possible in some of the larger high schools in South Dakota. Here there are enough pupils, enough teachers, and equipment to carry out the enterprise successfully. In many of the smaller schools the only possibility would be that there might be enough pupils (nearly all) going into some one occupation, so that the entire attention of the school might be turned in that direction.

If the boys and girls entering in 1918 have anything like similar experiences to the boys and girls who have been in school since September, 1914, the conditions given below under Groups I, II, and III may be expected.

The following arbitrary classification was adopted on the basis of the returns received: Group I, high schools reporting enrollments of 110 or more; Group II, high schools reporting enrollments of 50 to 109, inclusive; Group III, enrollments of 49 or less.

Group I.—Of 100 boys entering high school, 50 will leave before the close of the fourth year, 27 will go on to college, 14 will go into trade or industry, 13 will go on the farm, and 13 into business. Others will go into scattering occupations.

Of 100 girls, nearly half will go on to school or college, about one-fifth will stay at home or marry immediately after leaving school, about 15 will go into offices, and 23 will teach school.

Group II.—Of 100 boys and girls entering school, 40 will leave school before graduation.

Of 100 boys entering high school, 26 will go on to college, 25 will go on the farm, 10 into business, 6 into teaching, and 8 into trade or industry.

Of 100 girls entering school, 30 will go on to college, 26 will remain at home or marry immediately after leaving school, 5 will go into business, and 34 will teach immediately after leaving school, only half of the latter remaining to graduate.

Group III.—Of 100 pupils entering school, 60 will leave before completing four years' work. Part of this is due to three and two year schools, but this is taken account of in the data given above.

Of 100 boys entering, 24 will go on to college, 35 will go on the farm, 7 into business, 3 into teaching, and 6 into trade or industry.

Of 100 girls, 35 will go to college, 19 will remain at home or marry, 10 will go into office work, while 29 will teach.

In all three groups college preparation is the type of work pursued by the greatest number. For the boys, commercial training and agriculture rank next in order, the commercial training being of greater importance in the larger schools, agriculture in the smaller. For the girls, preparation for teaching claims the largest number, next to college preparation. It is unfortunate for the rural schools of South Dakota that nearly one-third of the high-school girls teach without further preparation, and that one-half of these leave school before graduation.

The following is the distribution of pupils taking courses in these high schools during the first semester of 1917–18. The number after each subject indicates the number of pupils who have registered for a course in that subject, one pupil registering for two courses in the same subject counting as two:

TABLE 82.—*Number of pupils registered in courses in the various subjects, fall semester, 1917–18, arranged in groups, for 157 schools.*

Subjects.	Group I (19 schools).	Group II (36 schools).	Group III (103 schools).
Total number pupils enrolled in schools	3,975	2,634	2,641
Number of registrations in college preparatory subjects:			
English	4,481	2,435	2,193
Science	3,154	1,516	1,336
Mathematics	2,824	1,333	1,592
Latin	1,189	982	688
Modern languages	1,017	510	514
History	1,889	1,309	1,634
Registration in vocational subjects:			
Commerce	1,511	492	413
Manual arts	1,067	508	180
Household arts	1,787	563	508
Agriculture	182	86	52
Teaching	96	134	50

The subjects offered by the high schools are given in the following table:

TABLE 83.—*Subjects offered by South Dakota high schools.*

Subjects.	Group I (19 cities).		Group II (33 cities).		Group III (82 cities).	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
English	19	100	33	100	82	100
Mathematics	19	100	33	100	81	98.8
Science	19	100	33	100	76	92.7
History	19	100	33	100	75	91.4
Latin	19	100	27	81.8	55	67.0
Modern languages	18	94.7	25	75.8	49	59.7
Commerce	12	63.1	15	45.4	26	31.7
Manual arts	15	78.9	16	48.5	7	8.5
Household arts	17	89.4	14	42.4	8	9.7
Agriculture	10	52.6	5	15.1	8	9.7
Teaching	4	21.0	3	9.0	3	3.6

Vocational training in the larger high schools.—It is quite possible for the larger high schools of South Dakota to give real vocational training. It takes money. It takes expensive and well-trained teachers. It takes equipment. The large enrollment in commerce is justified by the experience of past classes. Nevertheless, when past experience shows that about the same number of high-school boys enter trade and industry and agriculture as do commercial pursuits, it is not right that over 1,500 shall be enrolled in commerce classes, over 1,000 in manual arts, and less than 200 in agriculture, particularly as South Dakota is preeminently agricultural. In a similar way, only 96 girls are taking work in teacher training, while 25 per cent teach without further preparation. A few classes in methods of teaching the elementary-school subjects, with opportunity for observation and a limited amount of practice in the local schools, would serve to raise professional problems for these young girls which would tend to stimulate a better professional attitude and have the ultimate result of building up attendance at the normal schools.[1] For the schools of Group I, therefore, the committee recommends that—

(1) The emphasis being placed upon commercial work be continued.

(2) The emphasis being placed upon home economics be continued and that more work be given, if possible.

(3) The work in industrial arts and agriculture be greatly increased.

(4) The facilities for teacher training be increased. That four-year accredited high schools organize teacher-training departments in a fifth or graduate year, as recommended in Chapter XIX of this report.

For the schools of Group II, ranging in size from 50 to 109, it is difficult to recommend much vocational training. We find that at present about one-third as many are registered for commerce, home economics, and manual arts as are registered for college preparatory subjects. This is necessarily due to the size of the schools and the constricted condition of the program of studies. It is strange, however, that these subjects should be so popular, when few go into commerce or industry and when more than one-fourth of the boys go on the farm and more than one-third of the girls teach. For the schools of Group II, when it is at all possible to add work in vocational training, the committee recommends—

(1) That the facilities for the teaching of agriculture be greatly increased, even at the expense of commercial subjects.

(2) That the facilities for teacher training be increased.

(3) That home economics be further emphasized.

The schools of Group III, all with four teachers or less, half with two or one, represent a very difficult problem. Here, while the student bodies are small and equipment and apparatus meager, nevertheless the occupational features are quite distinct. More than one-third of the boys farm. More than one-third of the girls teach. Despite this fact, there are only 52 registrations in agriculture and 50 in teacher training out of 2,641 pupils. We can not pass over lightly the vocational responsibilities of these schools. Many of these small schools offer the only educational opportunities that are anywhere available for miles about. Nearly 30 per cent of the pupils go to these schools. They can not be neglected. The committee recommends that agriculture and home economics be emphasized in the order named if any vocational education be attempted. This, of course, is doubtful in these small schools.

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[1] For details of teacher training in high schools, see Chapter XIX.

The possibilities for cultural training.—Certain responsibilities the high schools have in connection with earning a living. This we call vocational responsibility. Certain responsibilities have been thrust upon the high schools that have connection with no particular vocation. This we term cultural. The boys and girls that are turned out of the schools must be moral and upright. They must be loyal and patriotic, high-minded citizens of the United States, acquainted and practiced in their duties and quite as well familiar with their rights. They must be healthy and capable of caring for their physical welfare. They must be able to make good use of their leisure period, to read the best, sing the best, appreciate the best. These, coupled with good manners and a national and international rather than local point of view, mark the man or woman of culture. It is here that the great duty of the American high school lies. So long as the schools are small; so long as the teachers are few; so long as the boys and girls are unable to decide the particular line of work which they wish to follow; so long must vocational education be weak and comparatively inefficient. But no matter how efficient vocational education may in time grow to be, fundamental to it and far more important in the long run is the training that turns out men and women healthy, loyal, public spirited, moral, and capable of enjoyment. High-school work that is capable of producing these results must forever be encouraged.

This is of course the fundamental purpose of the college preparatory work. The English is to teach elegant and clear expression and to instill a love of the best. The sciences and history are there that the pupil may interpret life about him. Mathematics and language have their end here. The program of studies as it is at present outlined takes cognizance of this. Still, there is a phase of it that may be improved. The great ends of health, citizenship, morality, and the leisure period may be aimed at more directly and still may achieve college preparation.

The "core" of the program of studies as laid down is mathematics and English. Much of this is highly necessary, but not universally so. The great emphasis should be laid upon English, upon the social sciences (especially history and government), and upon the natural sciences (especially those relating to health). The school law recognizes health (narcotics and stimulants) and morality. Far more effective provision should be made to widen the scope of these provisions.

It is just possible that the problem of securing culture is not a curriculum problem. Some teachers can teach Latin so that all these things come from it. Many more fail to do so. Some teach history so that patriotic citizens are produced. Many more fail to do so.

The school-teachers of South Dakota should firmly resolve that no student should leave the high school without having firmly fixed as a part of his equipment for the battle of life (1) high character; (2) good health and a knowledge of how to care for it; (3) a knowledge of our history and Government, of our habits and customs, of our ways of doing things, and a love of our country; (4) some acquaintance with the best things that have been thought and said; and (5) a well-mannered expression of life, in habits, dress, speech, writing, and in dealing with others. These gained, the people of South Dakota would reap ample reward for the expense of their high schools.

Provisions for the students who drop out.—It will be noted in the program of studies laid out by the State superintendent of public instruction that the three, two, and one year schools are only abbreviations of the four-year school. The assumption has been that students will go elsewhere to attend a full four-year high school after completing the shorter school course at home. It is evident, however, that this is not the case. Only 50 pupils in 100 finish the course as laid out. Half leave before graduation. Nevertheless, all are treated exactly as if they were going to graduate. No credit is given for American history before the third year, or for economics before the fourth.

Furthermore, the courses as outlined do not proceed upon the cycle system, which is designed to bring the work to a close, so that those forced to leave may not be left with a mere remnant of what they might have had.

The committee, therefore, recommends that:

(1) The work in the schools of South Dakota be conducted with a view to the needs of those who drop out as well as to the needs of those who graduate.

(2) The teachers be brought to realize that they are responsible in their high school for the final education of all the pupils that enter high schools.

(3) The high-school inspector and State superintendent and State course of study recognize this principle, previously neglected.

The compromise between these principles.—Vocational education, cultural training, and provision for varying stay in school are each difficult enough to provide separately. It is quite impossible to achieve them all equally well in any system of schools, not to mention the small high schools of South Dakota. The following suggestions are submitted for the schools of varying size:

(*1*) *The one-teacher high school.*—There are 22 of these schools. The curriculum varies from one to four years, the high school at Faith offering four years of work with but one teacher.

The committee recommends that the following standards be followed as nearly as conditions will permit:

(*a*) That one-teacher high schools do not offer more than two years of work.

(*b*) That teachers be permitted to teach eight periods a day, 30 minutes being deemed the proper length of period on account of the small number of pupils.

(*c*) That English, science (including physiology and hygiene), civics and history, and agriculture and home economics be made the core of the curriculum.

(*d*) That if there are more than 15 pupils enrolled, two teachers should be employed.

(*2*) *The two-teacher high school.*—There are 42 of these schools offering from one to four years of work in the 157 considered in this report. The committee recommends that the following standards be followed as closely as possible:

(1) Two-teacher high schools should offer not more than three years of work.

(2) The course of study should be adjusted both to those who are preparing for college and for those who are to stop school at the end of two years.

(3) That the major portion of the course be designed for culture, centering about English, science (as above), and mathematics or languages.

(4) That students not preparing for college be allowed to substitute practical arts for mathematics or language.

(5) That teachers be allowed to teach seven 35-minute periods, the small size of classes allowing this.

(6) The program of studies for the two-teacher high school would appear as follows:

First year.

COLLEGE PREPARATORY.	NONCOLLEGE PREPARATORY.
English.	English.
History (government and politics).	History.
Algebra.	Elective.
Foreign language.	Practical arts, agr., comm., or manual training.
	Practical arts, home economics.

Second year.

English.	English.
Science (hygiene and physiology).	Science.
Geometry.	Elective.
Foreign language.	Practical arts, agr., comm., or manual training.
	Practical arts, home economics.

This arrangement allows two teachers to carry two years' work, combines cultural with very meager vocational work, provides for those who drop out, and does all this on 12, or at the most, 14 separate classes.

(3) *The three-teacher high school.*—There are 34 three-teacher high schools, offering three and four years of work. The committee recommends, where three teachers are employed, that an additional year, or possibly two, comprising studies conforming to community needs, be superimposed upon the proposed two-teacher school. By suitable alternation this can be accomplished.

(4) *The four-teacher high school.*—There are 17 four-teacher high schools. Four years of work should be offered, the first two like the two-teacher school; the second two teachers strengthening the work of the last two years, and possibly teaching a class or two in the lower classes.

(5) *Five teachers and more.*—No specific suggestions can be made for each of the 42 high schools without intensive study. It is of course more easy for them to effect a suitable compromise between the three principles than for the smaller schools. The ultimate solution will depend upon a thoroughly competent high-school inspector who can not only travel about the State, but remain long enough in a school to study the situation and upon this as a basis give helpful counsel and advice.

Section 3. THE PROBLEM OF ADEQUATE SUPERVISION.

High-school education in the United States is in need of constant supervision. This is for the reason that the schools are relatively new, that the problems are so recent as to be imperfectly solved, and that the superintendent, principal, and teachers are unable to meet them efficiently without aid of some sort.

Supervision of the high school partakes of two kinds, supervision from within the school system and supervision from without. Improvement is needed in both kinds.

How to make supervision by the superintendent and principal adequate.—The high-school principal in South Dakota spends the major portion of his time in teaching. In the Group I schools (110 pupils and over) the median principal teaches three periods a day, the quartiles being two and four, respectively. In the high schools of smaller size the principal does more teaching, nearly as much as the teachers who are supposed to have little administrative work, the median principal teaching five periods daily, with four and six periods representing the quartiles.

It is not only true that the high-school principal in South Dakota spends a great deal of his time in teaching; he teaches many different subjects and is called upon to perform the difficult feat of preparing in many lines in which it is impossible for him to be a specialist. This is because of the need for readjustment of the program that comes from continual employment of new teachers.

Not only does the high-school principal spend a great deal of his time in teaching; he has many other duties which leave little time for the supervision of teaching. In the large schools the median principal spends 50 hours a week on school work. Of this time he spends 13½ on teaching, 8½ in preparation for teaching, and the remainder on varying duties. It is important to note that he only finds 3 hours a week to spend in the supervision of teaching. In the middle-sized schools of 50 hours' work, the median principal spends 18 hours teaching, 15 hours in preparation for teaching and correcting papers, but only 2 in the supervision of the teaching of the other members of his staff. The principal of the small school spends even less. It should further be noted that in very few of the schools is there any further supervision.

Consideration of the data brought out in other sections of this study, the immaturity of the teachers, their brief experience, and their continual moving from place to place, securing very brief tenure in office, shows the need of the supervision of their teaching. The principals of the high schools are employed to teach and to handle various administrative details, but the supervision of the teaching of the school is lost in the rush. This is a bad situation and should be remedied. The committee recommends:

(1) That the State superintendent of public instruction incorporate in his provisions for the accrediting of schools a clause to this effect: "No school shall be accredited as a four-year accredited high school in which the principal shall teach more than three periods daily. No school shall be accredited as a three-year accredited high school in which the principal shall teach more than four periods daily."

(2) That in the increased State inspection recommended below additional work upon the problems of supervision be carried on by the inspector of high schools, with the idea of training high-school principals to supervise; and that in the small high schools the inspector spend much of his time in the supervision of teaching and in meeting with the teachers.

(3) That emphasis be laid upon the problems of supervision of instruction in all agencies that work to that end.

How to make supervision by the State department of public instruction more adequate.—At present the system of accrediting and inspection of high schools in South Dakota is altogether inadequate. The law merely makes the provision that the State superintendent of public instruction or his assistant shall have the power to inspect these schools and accredit them to institutions of higher learning. No high-school inspector is provided, and no provision is made for traveling allowances adequate to the needs of the schools or the size of the State. As was stated above, the State superintendent has certain power over such schools as desire to be accredited, but only 78 schools so far have complied with the regulations of the central authorities in this regard.

The schools of the State are largely bunched in the eastern third of the State. In the middle and western parts the schools are far apart, scattered, and not at all adequate to the needs of the boys and girls of those sections. This is, of course, very largely due to the sparseness of the population. There is only one high school (usually small) for every 400 square miles of territory. The areas are smaller in the more densely populated portion of the State and much larger in the more sparsely populated sections. Anyone who has spent time in traveling in South Dakota will also realize that train connections are not of the best, and that it is not easy to go from place to place in the State.

The high-school plan of inspection at present in force consists in utilizing a small portion of the time of the deputy State superintendent. The size of the State, the sparseness of the schools, and the difficulties of travel make this poor provision altogether inadequate. With large schools and ordinary problems it would be all too little.

In times like these, however, such a force for inspection can not be excused. Bigger problems are confronting the schools of South Dakota than ever before. Some one has to check up the schools and see if the work is satisfactory. The schools must be inspected that reports may be verified. This will be particularly necessary when State aid to high schools will depend upon their performance of certain duties. But the high-school inspector that South Dakota needs will not be a mere inspector or reporter. He must be more than an educational police officer. In a real sense he must be the teacher of the teachers in the high schools of the State.

There should be at least two inspectors, one with the sole duty of traveling from one to another of the small high schools, say of 100 pupils or less. The inspector of smaller high schools would have as his duty the collection of data for the State superintendent and the verification of reports. He should assist with the content of the program of studies, advise with regard to the purchase of books, and the content and management of the library, observe classes and confer with teachers, possibly hold teachers' meetings to the betterment of the work of the school. Each year he should pick out one problem of a special nature to carry to the schools of the State, with the idea of effecting general improvement.

There should also be an inspector or supervisor of large high schools. He should be a specialist in school administration, to assist the superintendents in the larger cities. He also should be an investigator and teacher, not only an inspector.

The permanent betterment of the high-school system rests upon these inspectors and upon their influence upon the State. If they are mere clerks, their influence will be little. If they are teachers and men of ability, whose decision will either bring or fail to bring State money to the schools, they will command the respectful attention of the high-school teachers. Both men should have good training and experience in problems of high-school administration. They should have had at least two years of graduate work. They should be able to fill professorships in the State university. Their salary should at least equal what is paid superintendents in the larger cities of the State. They should be appointed by the State board of education from a list of eligible candidates recommended by the superintendent of public instruction.

The proper program of studies, the proper content of each subject, the proper government of the school, good relationship in athletics, an adequate system of records and reports, improvement in teaching, and a realization of the true task of the small high school can only come from a *continuous intelligent survey* of the State, made from day to day by these men, and *continuous teaching* following as a result of their efforts.[1]

Section 4. THE PROBLEMS OF STATE AID FOR SECONDARY EDUCATION.

It is probably true that the major portion of the power that the State governments in the United States have become accustomed to exercise over the local unit has been the result of subsidy from the Central Government. With the proceeds of the sale of public lands and with the remission to the local units of fines and poll taxes and other sources of income, the States found that they exercised a certain power over the governmental units within them.

This power has been used for three main purposes:

(1) To return to the various individual governmental units their share of State money not otherwise distributed.

(2) To help to equalize educational opportunity in various parts of the State, helping poor districts and sparsely populated sections to maintain good schools.

(3) To inspire the school boards of the State to progress by granting sums of money for various types of improvements.

As was shown in Chapter IX, only the first of these is secured by the present system of distribution of funds. The State moneys are distributed to the counties, and from the counties to the districts, in proportion to the number of children within the county above 6 years of age and under 21. This distribution is made regardless of the kind of schooling offered, regardless of whether a high school is founded or not, and the only report that the district has to make comes from the report of the county superintendent. In return for the grant that is made, the State has very little power in saying how it shall be spent. If a district already has an elementary school and wishes to add a high school, no additional funds are given. If a seven months' term is provided in a certain school, and a nine months' term in another, no credit is given the school for the longer term. One school may have one teacher for 20 pupils, another four teachers, and still the State funds would be distributed in the same fashion. No provision is made for local need. No stimulus is given to local initiative.

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[1] The reorganized State department of education (Chapter V) is planned with provision for a division of secondary schools, in charge of a high-school staff. While work of high-school inspection and professional supervision undoubtedly will require the full time of two experts to make it fully effective, it may be wise to ask for one full-time inspector only at the outstart until other just as urgent needs in the State department shall have been met.

This is a very inefficient method for distributing the school fund of a State, and it works an injustice to the pioneers of the State, those who live in the outlying districts. Where land valuations are low, where distances are great, and where there are relatively few people of school age, the provision of any facilities for high-school education is very expensive, much more expensive per pupil than in the more settled areas. No provision is made for this in the law. In this respect the law was once far more just than it is at present. When the Territory was granted statehood, there was nothing like the difference between one part of the State and the other. As the eastern third of the State has been settled and built up, it has received an increasing share of the State money.

Distribution of funds according to school population also has the effect of making for poorer schools and fewer of them. There is no incentive for a community to build a high school; nor is there additional aid. All the expense of the high school is placed upon that now needed for the elementary school.

This method of distribution of funds also has the effect of hurting the instruction in the elementary school. Effort is required to build up the high school. Money is required. It often happens that, when the high school comes in without additional State aid, the real strain falls upon the elementary school. This of course is unfortunate.

A further disadvantage of this type of wholesale and automatic distribution of State funds is that the State has no power to help remote and backward communities to better themselves. The State should grant those funds only upon the most complete cooperation of the district.

Plans of State aid now in use.—In general there are five ways in which States give financial aid to high schools which yield better results than the system now in use in South Dakota: (1) State aid for general high-school purposes; (2) State aid for high-school libraries and laboratories; (3) the use of State aid for the extension of high-school privileges to pupils who do not live near high school;

(4) State aid to special courses within the high school, such as agriculture, teacher training, citizenship, and the like; and (5) State aid for the founding and maintenance of special high schools, such as agricultural high schools,[1] normal training high schools, etc.[2] The first of these five methods is considered in this study because of its greater simplicity and because it is capable of including the others within it. Its features are as follows:

(1) The State establishes a high-school fund. This is not universally true, but many States have done so. For illustration, Wisconsin established a high-school fund of $100,000, Texas $50,000, Arkansas and West Virginia $40,000. The establishment of the separate fund has the force of putting the stamp of public approval upon high-school education. At the same time it protects the public elementary education of the State. One great danger in the establishment of high schools has been the fact that too often the elementary schools were not as well supported thereafter.

(2) Money appropriated according to need of the local units. The great difficulty with the present plan of distribution of South Dakota's school fund is that money is given regardless of need. The big schools, little schools, and no schools at all share alike in proportion to the population of school age. The second fundamental principle is to center attention upon these schools in the State that are *in real need of State aid.* Several plans have been devised to care for this. Massachusetts excludes from State aid all high schools in communities of 500 families or more. Arkansas, South Carolina, and North Carolina exclude towns having a population of 3,500, 2,500, and 1,200, respectively. Massachusetts also has a plan whereby every town having a taxable valuation per pupil in excess of that of the average of the State is thereby excluded from State aid. Missouri, just cited, gives this aid: The maximum tax stipulated in accordance with the valuation of the district. A district complying with all regulations receives $800 if its valuation is less than $300,000; $600 if its valuation is from $300,000 to $400,000; $400 if its valuation is from $400,000 to $600,000; and $200 if its valuation is $600,000 or more. It is clear that the best thought upon State aid is, at least for the present, to help the poorer and less populated districts to maintain good high schools.

(3) Money appropriated according to the efforts of the local units. Many States reward efforts of the local units by helping them, provided certain things are done. This may be incorporated in the original proviso, fundamental to any State aid. For instance, Mis-

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[1] See Chapter XI.

[2] These plans are outlined in detail in the various State laws (see Bul. of Bu. of Educ., 1915, No. 47, for a digest of school laws), and commentaries upon them are found in Cubberley's "School Funds and Their Apportionment" and in Butterworth's "An Evaluation of Methods of Financing Public Secondary Education in the United States."

souri, just cited, gives this aid: The maximum tax stipulated by law is levied, provided a high school is maintained and a principal employed, provided each teacher is paid at least $40 a month, provided nonresident pupils are admitted at a reasonable fee, provided the average attendance of the previous year has been 15 or more, and provided it gives a year's course in agriculture. Such aid can not be more than one-half of the high-school teachers' salaries. A sum of money may be granted in proportion to the amount furnished by the local community, a sum according to the classification of the high school, a sum varying according to the daily attendance, a sum according to the number of teachers, or a sum according to the cost of running the school. Probably the best plan is to appropriate a lump sum of money to a school of a certain class, provided it meets standards laid down by the State department of public instruction.

Upon this as a basis the committee recommends that—

(1) The legislature create a special fund for the improvement of secondary education. (This should be set aside from the State tax, proposed in Chapter IX, or be an annual State appropriation in addition to and separate from the State school fund. It should include at least $75,000 annually.)

(2) This fund be utilized to aid districts that need it most.

(3) Aid be granted to high schools in proportion to the efforts of the local community on the following basis: A lump sum of $800 for a standard four-year high school; $600 for a standard three-year high school; and $500 for a standard two-year high school. (To secure this money the high school to be in operation 36 weeks, to follow the State course of study, to pay its teachers a sum double the State aid or receive proportionately less, to reply to and meet the requirements of the State superintendent for accrediting.)

This program of aid to the high school based upon the principles outlined above would go a long way toward establishment of a State-wide system of secondary education. It would help centralize control of secondary education. It would free the children of certain communities from the shortsightedness of members of certain boards of education. It would enable the State to exercise healthful control of the big investment which it has been making for years past.

With this established as a basis, it would then be possible, as the education in the State develops, to include other types of State aid, such as the establishment of other types of secondary schools and the subsidy of various types of subject matter, as is now being done by the Smith-Hughes Vocational Education Act.

The important thing for the people of South Dakota to realize is that special State aid for high schools is fundamental to their development; that these funds should be given with two ideas in mind, the one to encourage and reward effort on the part of the local community and the other to equalize educational opportunity for the boys and girls of the State; and that the future development and improvement of these schools and the institution of new and better work are dependent upon this course. Montana, Minnesota, and North Dakota all follow this plan.

Section 5. THE PROBLEM OF A PROPER TEACHING FORCE.

The problem of securing a high-school teaching force that is capable of assuming in an efficient way the burden that is thrust upon it is as important a part of a program of school development as any other single feature. In order to make the improvement that is needed in high-school education, South Dakota must be able to train, employ, and hold competent teachers.

As indicated in Chapter XVII, the school laws of South Dakota provide for the certification of high-school teachers under five categories: (1) Life diploma; (2) State certificate; (3) vocational certificate; (4) provisional certificate; (5) first-grade certificate. Under the State law a teacher may teach in a high school in South Dakota if he has graduated from a standard college or from a normal school four years in advance of high school, or two years, if he has taken certain work in education. The law provides that these standards may be lowered for teachers of certain subjects, and that in some schools teachers may be employed who hold the first-grade certificate, meaning the equivalent of high-school graduation. This law is more or less ineffective, and to supplement it the State superintendent of public instruction has included in his specifications for a place on the accredited list the requirement that all teachers in four-year accredited high schools must have training equivalent to graduation from the State university, while in all other high schools the training must be the equivalent of a two-year normal course beyond a full four-year high-school course. It can thus be seen that the State superintendent in accrediting schools sets up higher standards than the State laws, and justly so. It must be remembered, however, that this ruling of the State superintendent has no effect unless the school wishes to be accredited, and that only about 40 per cent of the schools actually do become accredited.

Training of the teachers.—Without a great deal of patient study and personal conference it is almost impossible to secure an accurate idea of the exact training of a teacher. It is necessary to know the time spent in school, the subjects taken, the standing of the institution, and the character of the individual. Even then the information must be largely in the nature of an estimate. The data submitted below, therefore, are not to be regarded as scientifically accurate, but as the best means at hand by which the training of these teachers may be expressed.

TABLE 84.—*Training of high-school teachers in South Dakota, expressed in years beyond the high-school course.*

Length of training.	Teachers in Group I schools.[1]	Teachers in Group II schools.[2]	Teachers in Group III schools.[3]
No years beyond high school	0	0	10
One year beyond high school	8	0	13
Two years beyond high school	21	19	74
Three years beyond high school	7	8	28
Four years beyond high school	142	116	221
Five years beyond high school	26	6	7
Six years beyond high school	5	2	0
Seven years beyond high school	2	0	0
Median	4.0	4.0	3.7
Q1	3.6	3.6	2.4
Q3	4.4	4.3	4.4

[1] Schools having more than 110 pupils.
[2] Schools having 50 to 109 pupils.
[3] Schools having less than 49 pupils.

On the whole the high-school teachers seem to be comparatively well prepared, much better than the State law would require.

Experience of the high-school teacher.—The teachers in each school were ranked in order of length of experience in months, and the median secured for each school. The conditions are shown in the following table:

TABLE 85.—*Median experience of high-school teachers of South Dakota.*

Teachers' experience.	Group I.	Group II.	Group III.
Under 10 months	0	7	19
11 to 20 months	1	8	18
21 to 30 months	2	7	14
31 to 40 months	3	9	11
41 to 50 months	9	2	12
51 to 60 months	2	1	5
61 to 70 months	2	0	6
71 to 80 months	0	0	2
81 to 90 months	0	0	2
91 to 100 months	0	0	6
101 to 110 months	0	0	1
111 to 120 months	0	0	1
121 to 130 months	0	1	0
131 to 140 months	0	0	0
141 to 150 months	0	0	0
151 to 160 months	0	0	0
161 to 170 months	0	0	1

This table reads as follows: In Group I there were no schools the median of the experience of whose teachers was under 10 months; in Group II there were 7 such schools, in Group III 19.

The high-school teachers of South Dakota for the most part are relatively inexperienced.

Tenure of the high-school teachers.—It is true that teachers do not remain in one place. The median teacher in South Dakota high schools remains in his position but one year and seven months. This is not worse than in adjoining States, however. In Iowa the tenure is but one year and 10 days, in North Dakota one year and four and one-half months, in Nebraska one year and two months. The lowing table shows the conditions in these four States:

TABLE 86.—*Tenure of office in four States as shown by the per cent of teac in same place for a given number of years.*

Length of tenure.	South Dakota.	North Dakota.	Nebraska.	Io
Holding place—	*Per ct.*	*Per ct.*	*Per ct.*	*Per*
1 year	29	34	45	
2 years	27	32	25	
3 years	17	14	14	
4 years	9	6	5	
5 years	7	6	5	
6 years	3	2	2	
7 years	2	1		
8 to 30 years	5	6	5	

Age.—The teachers of the high schools of South Dakota for young group. The median age for men is 29.5 years, for women years. Half of the men teachers are included within the ages 2 35; one-half the women between 24 and 32.

Causes of leaving the teaching profession.—The following q tions were asked: Why do the high-school teachers leave the scho Within the past three years (since September, 1914) how m teachers regularly employed on your high-school faculty have signed? Of this number, how many resigned to study? How m quit permanently? How many resigned to accept another posi in South Dakota? In other States? These data are given in the lowing table:

TABLE 87.—*High-school teachers resigning.*

Groups.	Schools in group.	Schools reporting useable data.		Teachers reported as resigning.		Teachers reported as resigning to study.		Teachers reported as resigning to quit permanently.		Teachers reported as resigning to take another position in South Dakota.		Teachers reported as resigning to
		Number.	Per cent.	Number.	Average number.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.
Group I	19	18	94.6	208	11.5	15	7.2	57	27.4	29	13.9	107
Group II	35	28	80.0	127	5.2	8	6.3	52	41.0	24	18.9	43
Group III	104	73	70.2	204	2.8	26	12.7	68	33.3	72	35.3	38
Total	158	119	75.3	539	4.5	49	9.0	77	32.8	125	23.2	188

It has already been shown that the teachers of South Dakota main but a short time in one place. From this table it can be that, of those who leave, about one-third quit the profession per nently, about one-third leave the State to teach in another State, about one-fourth move to another school.

Load carried by these teachers.—To illustrate the typical am and character of this work it was decided to find out the nun of subjects taught by each teacher. Subjects were classified follows: English, ancient languages, modern languages, mathematics, United States history, other history, chemistry, physics, other science, commercial, pedagogy, normal reviews, industrial arts, domestic science, music, drawing, penmanship, physical training, and grade work. The number of subjects which these teachers taught is shown in the following table:

TABLE 88.—*Number of subjects taught by teachers in South Dakota high schools.*

Subjects taught.	Group I.			Group II.			Group III.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
One	65	20	85	14	4	18	4	1	5
Two	73	31	104	42	14	46	19	4	23
Three	18	14	32	37	23	60	55	15	70
Four	3	3	6	13	9	22	45	25	70
Five				4	4	8	16	12	28
Six				1		1	5	8	13
Seven								3	3
Median	2.6	2.4	2.3	3.0	3.4	3.2	3.9	4.6	4.1

This means that in the schools of Group I most of the teachers teach two or three different subjects for which special preparation is needed, but an appreciable part teach only one. In schools of Group II most of the teachers distribute their efforts over two to four different subjects; in Group III they distribute over three and four, with as many teaching five as teach two. This, of course, has the significance of emphasizing broad preparation. High-school teachers in South Dakota for the present should not specialize in one subject, but rather should have two or three in which they are equally expert.

Salaries paid high-school teachers.—The salaries of high-school teachers in South Dakota are given in the following table:

TABLE 89.—*Salaries of teachers in the high schools.*

Salaries.	Group I.		Group II.		Group III.	
	Men.	Women.	Men.	Women.	Men.	Women.
$1,700	1					
1,600	3					
1,500	2	1				
1,450	1					
1,400	2					
1,350	4	1	1			
1,300	9	3				
1,250	3	1				
1,200	14	10	1			
1,100	2	11	1			
1,050	1	3				
1,000	10	13	1	1		
950		4	2			
900	5	20	4	3	1	
850	1	12	1	9		1
800	2	30	3	14	2	5
750	1	19	2	30		18
700		18	3	25	1	18
650		3	1	13	1	44
600		2		2	1	19
550		2			2	3
500						1
250						1
150					1	
Median	$1,228.50	$860.00	$875.00	$714.00	$675.00	$685.00

These data give in a complete way the material rewards gained by high-school teachers (excepting principals) in the high schools studied in South Dakota. The salaries of the principals are given in the following table:

TABLE 90.—*Salaries of high-school principals in South Dakota.*

	Group I.		Group II.		Group III.	
	Men.	Women.	Men.	Women.	Men.	Women.
$3,100 to $3,150	1					
2,200 to 2,250	1					
2,000 to 2,050	2					
1,900	1					
1,800	2		1		1	
1,700	5		3			
1,600	1		4			
1,550			1			
1,500	3		5		2	
1,450	1		2			
1,400	2		5		1	
1,350			1		1	
1,300		1	1		7	
1,250			3		3	
1,200			5		10	
1,150			1		6	
1,100		1			9	
1,050	1		1		2	
1,000	1	2			11	3
950					2	1
900		1	2	1		2
850				1		1
800				2	1	2
750		1		1		1
700				2		
Median	$1,715.00	$1,025.00	$1,435.00	$810.00	$1,111.09	$825.00

The characteristic teacher.—The teacher that is typical of the high schools of South Dakota can best be described by the medians given above.

The man teacher in the larger schools is over 30 years of age, has graduated from a four-year college, and has been in his present position nearly two years, after having taught three years elsewhere. He teaches two or three subjects, more often two than three, and receives a salary of over $1,200, and if he is promoted to a principalship can do better. The woman teacher is over 27 years old, has graduated from a four-year college, has been in her present position nearly two years, having taught three years elsewhere. She usually teaches two subjects, but is more likely to teach three than a man. She receives a salary of $860.

In the Group II schools the male teacher is just under 30 years of age, has taught but one year before coming to his present position, and has taught nearly two years in this place. He teaches three subjects and receives a salary of $875. The female teacher has graduated from a four-year college, teaches three or four subjects, has had experience and tenure equal to the male teacher, but only receives $714 in salary.

In the small schools the age and training of the teachers is very little different. The teachers are a little younger, not quite so well trained. The male teacher receives $675 and teaches four different subjects; the female teacher receiving $685 and teaches four or five different subjects, more often five than four.

About one-half of these teachers will leave their present positions this year, one-third to leave the profession permanently, one-third to teach in another State, one-fourth to take a place in another school within the State, and the remainder for varying reasons.

South Dakota has as good a teaching staff as the States which lie adjoining. The teachers are fairly well paid, well trained, and remain at their posts somewhat longer than the teachers in Iowa, North Dakota, or Nebraska. The weaknesses found are common in other States. The strong points in the State are not so strong that they might not be stronger.

Whatever there is of excellence in the situation is not due to the law concerning the certification of teachers. It comes solely from the office of the State superintendent of public instruction, who has made the schools live up to the standard set by him, with practically no authority.

Chapter XVII contains recommendations making provision for a gradual reorganization and unification of the certification laws. If these are accepted, certificates will, in due course of time, be issued to graduates of professional courses in normal schools and other professional schools only. It will also reduce the number of certificates to be issued. In addition to these provisions the committee recommends—

That five types of certificates, carrying certain privileges and granted only after certain requirements, be granted to teachers for high schools, viz:

First-grade high-school certificate.

Valid for life.

Good in any high school in the State.

College graduation, or its equivalent necessary for.

Twenty semester hours in education and psychology.

Five years of successful teaching.

Second-grade high-school certificate.

Valid for five years and renewable once.

Graduation from junior college, normal school, or its equivalent.

Ten semester hours in education and psychology required.

Three years of successful teaching.

Valid in all high schools, except four-year accredited high schools.

Provisional certificate.

To be granted to those who meet above requirements, experience alone excepted.

Vocational high-school certificate.

To be granted as at present, omitting foreign languages.

Special high-school certificate.

To be granted to those teaching in high schools in South Dakota before the passage of this act.

Valid for two years in any high school of the State.

May be renewed as often as desired by attendance and successful completion of four semester hours of work at a six weeks' summer session of a standard college, normal school, or teachers' college.

Section 6. THE PROBLEM OF SPEEDING UP THE WORK.

A number of agencies are combining to speed up the work of the public schools. The increasing demand for higher training for entrance to professions has placed emphasis upon economy of time. When the young physician has spent eight years in the elementary school, four in high school, two or three in college, and four in professional education, followed by a year or two as an interne, it would seem as if there had been some valuable time wasted somewhere along the line. The practice of 15 years of preparation for professional education is not warranted by experience in the French or English schools. This has had the tendency to increase agitation for speeding up.

The prospect of military training, consuming a year or two of a young man's life, will increase the difficulty. It will advance the age of entrance into professions nearly to 30. The result will be, without doubt, to cause the schools to do the work they are now doing in less time.

As a war measure, the speeding up of the high-school work will do much good. America needs trained men—the better trained the better. There will be bigger problems to solve. Many boys will be called from school at the age of 21 for military service. The public schools are confronted with the problem of giving even more training in less time. Anything that will tend to increase the speed with which our schools may work without decreasing the quality of the work will be of real service to the nation, not only in times of war but in the peace that is to come. Two features of the speeding-up process will be discussed here.

(*1*) *The schools may speed up the work by spending more time in teaching.*—Many of the schools in South Dakota were forced to increase the speed of school work either by lengthening the school day or by teaching on Saturday. This was true this year because of the failure of the coal supply, or because of the demand for early closing to assist in planting the crops. Good results were found as a result of this plan.

Another plan for speeding up the work of the schools is the institution of the summer high school, an institution which has become increasingly popular in the last few years. In 1916 there were summer high schools reported by 109 cities, the majority running for six or eight weeks. The plans, value, cost, and practice in the case of summer high schools are set forth in Bulletin No. 45, 1917, Bureau of Education. It is plainly shown there that the plan is simple, the administration not complex, the results good, and the cost relatively little.

Wherever possible the schools of South Dakota should increase the length of their school day, week, and year. Credit for work so done and pay for the teachers should be proportionate to the time put in.

(2) *The schools may speed up the work by bridging the gap between the elementary and secondary schools.*—One great source of waste of time is the gap that lies between the elementary and secondary schools. The pupil is accustomed to certain treatment in the grades. He usually has but one teacher. He remains in one room. He is accustomed to certain subjects that he has taken for some time. Suddenly he is transferred to the high school. Here he moves from room to room. He is taught by different teachers. New subject matter confronts him. So difficult is it for him to accustom himself to the new order that he finds it hard to keep up. The greatest number of pupils drop out of the high school in the first few months.

From these arguments have come the agitation for the junior high school, a reorganization of grades seven, eight, and nine, the better to suit the needs of the age involved and to make a "lap joint" between the schools.

Seven of the schools answering the questionnaire reported junior high schools, two additional schools planning to have them next year. They are—

	Year established.
All Saints (Sioux Falls) School	1914–15
Madison	1913–14
Huron	1916–17
Rapid City	1916–17
Waubay	1916–17
Herreid	1916–17
Redfield	Planned for 1918
Owanka	Planned for 1918

These schools are planning to reorganize the work in an effective way.

It is not necessary, however, for the majority of the schools in South Dakota to have junior high schools. Quite as good an effect may be produced otherwise. This is true for a number of reasons:

(1) The high schools in South Dakota are not separate from the elementary schools. Out of 186 schools, 172 have the grades and high school both in one building. The teachers also spread between the work in the elementary and high schools.

(2) In many of the schools the upper grades and high schools share the same study hall. This is true in 35 schools.

(3) In 29 out of 122 schools there is departmental work in the upper grades, particularly in the seventh and eighth. This has the effect of making the work more alike in the two schools.

(4) In 17 out of 129 schools elementary-school pupils are allowed to take some high-school work upon certain conditions, such as "on trial," "upon ability," "fast group," and the like.

(5) In 48 out of 124 schools elementary-school pupils take part in the student activities of the high school, such as literary societies, athletics, etc.

While the small high school has the disadvantages shown in the previous sections of this study, it is probably true that it has the possibility of more completely solving the problem of the relationship of the elementary school and the high school than is possible in the cities, even where there is a junior high school. In buildings where both schools are located, where upper grade pupils sit in the high-school study hall, where both are taught by the same teachers, where exceptional grade children are allowed to start high-school work, and where the rest is on the departmental plan, where both elementary and high-school pupils take part in athletics and other social activities, then there is no gap. All that is necessary is a little careful planning on the part of the teachers.

The committee therefore recommends that the high schools of South Dakota take the following steps toward the solution of the problem of the elementary and high school:

(1) That the two schools be considered one school as much as possible.

(2) That the practice of teaching in both the eighth and ninth grades be encouraged.

(3) That exceptional elementary school pupils be allowed to take certain subjects in the high school, thus shortening the time for their high-school course.

Section 7. SUMMARY OF RECOMMENDATIONS FOR THE HIGH SCHOOLS OF SOUTH DAKOTA.

1. The creation by the State legislature of a special fund for the improvement of secondary education in needy districts, to aggregate at least $75,000 annually.
2. The enlargement of vocational training by—
   (*a*) Continuing and increasing the emphasis now placed on commercial work and home economics;
   (*b*) Increasing the work in industrial arts and agriculture;
   (*c*) Enlarging the facilities for teacher training.
3. Conducting the work in the high schools with a view to the needs of those who drop out as well as to the needs of those who graduate.

4. Amending the present certification laws to provide for granting five types of certificates for high-school teachers.

5. The strengthening of high-school supervision by—
   (a) Requiring the principals to teach less and to supervise more;
   (b) Increasing the amount and closeness of high-school inspection by the State.

6. The appointment of one, and preferably two, high-school inspectors.

7. The equalization of opportunity for all children to acquire a high-school education through a system of competitive examination, scholarships, and remission of tuition.

8. The speeding up of the work in the high schools by—
   (a) Increasing the amount of time devoted to teaching;
   (b) Spanning the gap between the grades and the high schools, and organizing junior high schools wherever practicable.

Chapter XVII.

THE TEACHING STAFF AND TEACHER CERTIFICATION.

Problem of adequate teacher certification.—No phase of the survey is more important, and none is in more urgent need of remedy, than is an adequate teacher supply for the schools. It is undeniably true that for many years the teaching profession has been held in less high regard in the United States than is its due; the teachers have been ranked and rated more by their salaries than by their service to the public. Teachers' salaries are inadequate, and the professional requirements are correspondingly low. The profession has suffered because almost any kind of amateur can get permission to instruct school children. If it were not that the average public school teacher has given the public much more than he has received, it would have gone hard with the schools and education in our country.

The world war is making this already serious problem more acute. Since 1914 the cost of living has increased by leaps and bounds. Teachers' salaries have also advanced, but not so rapidly as the cost of living. Meanwhile, there is an urgent demand for competent persons in the numerous war industries; many are called to their country's flag. As a result the schools may soon go begging for teachers, unless the public and law-making bodies of the States take the matter seriously in hand. Now, in the days of urgent need, is the right time to secure the future of the teaching profession by making it possible for the profession to become *professionalized.*

Composition of the teaching staff.—But, first, who are the teachers that have been intrusted with the education of school children in South Dakota? What is their number and preparation? Their teaching tenure and remuneration? Their social status? And what is the probability that they will follow teaching as a life work? These and other questions are answered in the following paragraphs.

The State requires an army of more than 7,000 teachers to fill the elementary and secondary schools; of these nearly 2,300 must be renewed annually, because of the instability of the profession. The actual number of teachers employed has not varied much in the last five-year period. In 1912 there were in the schools 1,071 men teachers and 5,493 women teachers. Since then, the number of men has decreased slightly each year, and the women have increased correspondingly. Thus, in 1916 there were 1,032 men and 6,025 women teachers. Since the entry of the United States into the war there has been further marked decrease in men teachers. Women teachers will undoubtedly increase steadily in numbers. While this is to be expected, it is also quite essential to the welfare of the schools to keep in them as large a number of men teachers as possible. Particularly is this true if this great agricultural State is to realize its hopes of organizing the strong farm community schools discussed in a former chapter. But the teaching profession must first be stabilized and the opportunities in teaching be made the equal of opportunities in other callings. Without this South Dakota can not expect any large number of well-prepared, experienced men to remain permanently in the schools.

PERMANENT AND TEMPORARY TEACHERS

ANSWERS FROM 3941 RURAL TEACHERS

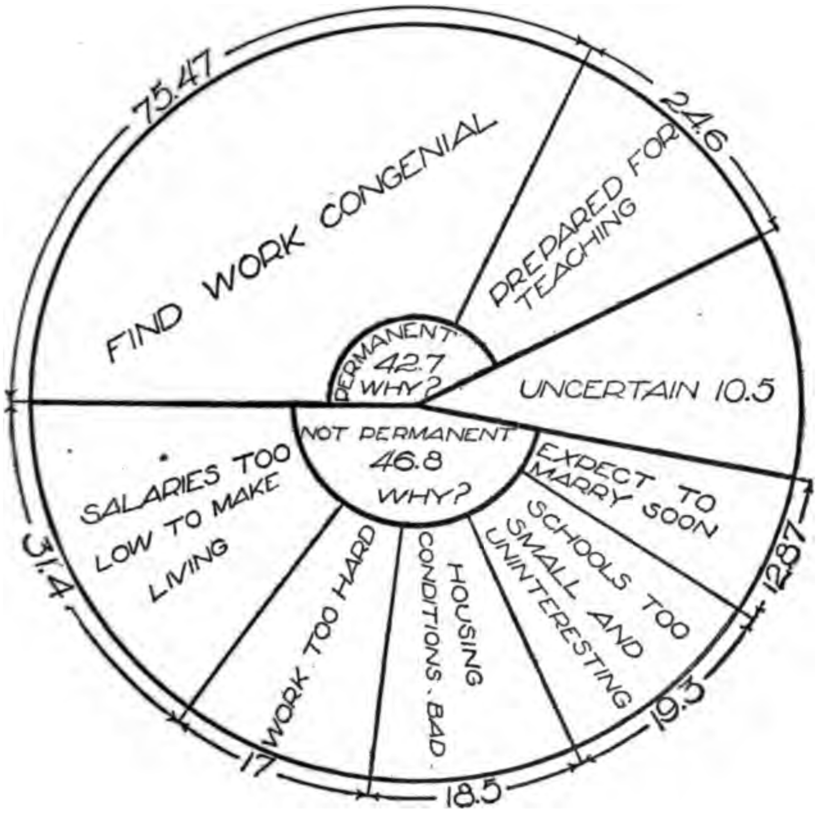

FIG. 16.

Cases of present instability.—Figure 16 is a graphic illustration of the above assertions. It is based on answers received from 3,941 rural teachers who were questioned in regard to permanency in the schools. Forty-six and eight-tenths per cent declared frankly that they do not intend to follow the profession permanently. And why? Thirty-one and four-tenths per cent find salaries too low for them to make ends meet financially; 17 per cent find the work too hard, chiefly because of bad hygienic and sanitary surroundings, long distance to school, many classes, etc. On much the same grounds 19.3 per cent declare the schools too small (in attendance) and uninteresting; 18.5 per cent find housing conditions bad, some using the expression "intolerable"; finally, 12.8 per cent expect to marry soon. Conditions in the village schools are practically as unsatisfactory as in the rural schools. Of 1,360 teachers, 39.1 per cent expect to remain in the profession permanently; 47.7 per cent desire to change for "more attractive and remunerative occupations" as soon as opportunity knocks. The rest are undecided.

Additional reasons for dissatisfaction are these: 913 teachers "find it advisable" to board and lodge with members of the school board; 741 teachers declare living conditions bad; unheated rooms, lack of privacy, poor cooking, and high cost of board are included in this list. Many complain that life in the country is lonesome and often unattractive; others find that the well-to-do people in the towns don't care to be bothered with the teachers. Here are reasons enough why many of the best young people in the State do not wish to invest much time and money in becoming professional teachers and why they do not remain long in the calling.

Length of teaching tenures.—What then is the length of teaching tenure in the different schools? Figure 17 shows that 31.2 per cent of the rural and 19.2 per cent of the village teachers are teaching their first school, and that only 9.6 per cent and 13.9 per cent, respectively, have taught as many as four schools. Few teachers have taught more than one or two years in a school. Finally, the average teaching life of a rural teacher is 3.76 school years, and of a village teacher, 4.95 years. Throughout it is found that the village schools are better stabilized than the rural.

Age of the teachers.—One of the greatest obstacles to establishing teaching on a professional basis, such as law and medicine, is the ease with which many persons, children almost, can get teaching credentials, particularly at the present time, when the demand has become exceptionally urgent. The law requires that "no person shall be entitled to a certificate who has not attained to the age of 18 years." Yet the questionnaires answered by rural teachers contain the names of 29 teachers under 17 years of age and of 53 who are just 17. How these persons have procured their certificates

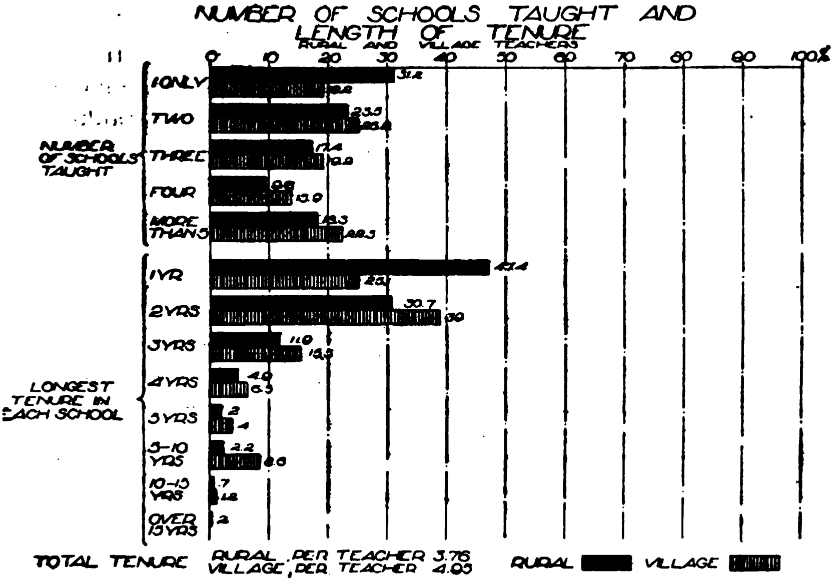
NUMBER OF SCHOOLS TAUGHT AND LENGTH OF TENURE
RURAL AND VILLAGE TEACHERS
0
10
20
30
40
50
60
70
80
90
100%
NUMBER OF SCHOOLS TAUGHT
1 ONLY
31.2
19.8
TWO
23.5
25.4
THREE
17.4
19.9
FOUR
9.8
13.9
MORE THAN 5
18.3
22.5
LONGEST TENURE IN EACH SCHOOL
1 YR
47.4
25.1
2 YRS
30.7
39
3 YRS
11.0
15.5
4 YRS
4.9
6.5
5 YRS
2
4
5–10 YRS
2.2
8.6
10–15 YRS
.7
1.2
OVER 15 YRS
2
TOTAL TENURE
RURAL, PER TEACHER 3.76
VILLAGE, PER TEACHER 4.95
RURAL ■
VILLAGE ▥

FIG. 17.

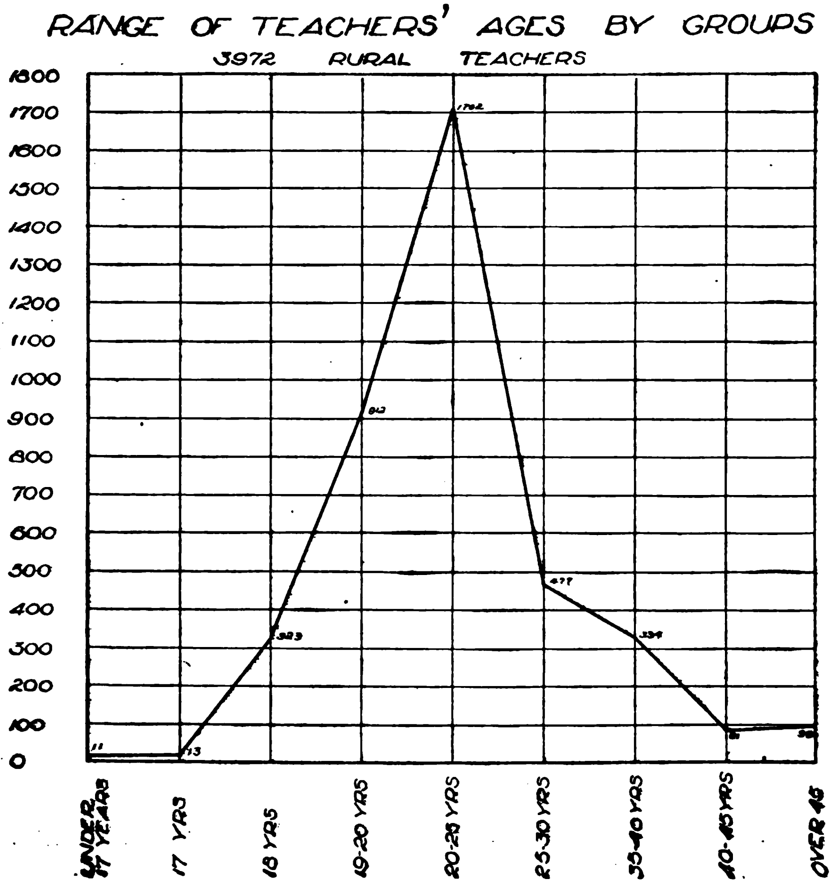
RANGE OF TEACHERS' AGES BY GROUPS
3972 RURAL TEACHERS
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
11
13
323
912
1702
477
334
81
98
UNDER 17 YEARS
17 YRS
18 YRS
19-20 YRS
20-25 YRS
25-30 YRS
35-40 YRS
40-45 YRS
OVER 45

FIG. 18.

is hard to understand, unless they deliberately falsified their statements to the examiners. At any rate such youngsters should be attending school instead of teaching. The largest group of rural teachers (2,641) range between 19 and 25 years of age; while the largest group of village teachers (553) range between 25 and 30 years. For really satisfactory results there ought to have been a gradual increase from the 19 to 20 group well upward of the 30 to 35 group. Some day this must come to pass.

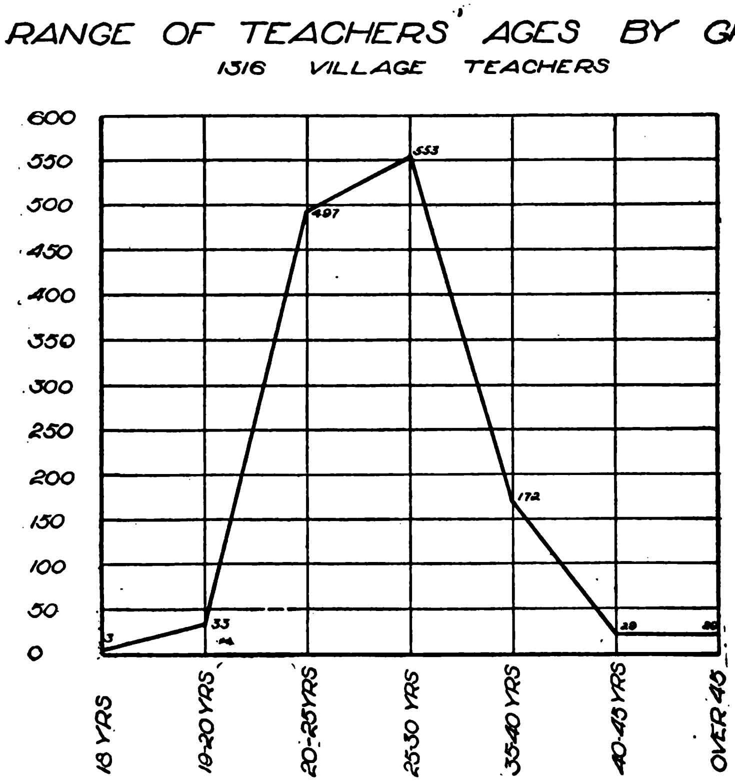

FIG. 19.

Marital condition of teachers.—Very few of the teachers are married. Out of 3,941 rural teachers reporting, only 434 are married; and in a total of 1,360 village teachers, only 210 are married. Very few except the married teachers have persons depending on them for support, there being 510 persons with dependents among the rural teachers and 264 among the village teachers. The small number of married teachers is another indication of the present instability of the profession. Well prepared, married men teachers can not be attracted to rural, or even village schools, before the permanent year-round community school is organized. It would also be worth while to induce married women, with grown families, to matriculate at the normal schools, preparatory to reentering the profession. Such women would at least understand children.

Homes for teachers needed.—As stated in Chapter X, homes are urgently needed for the teachers, and organized as a part of the school plant. Of the rural teachers, 90 per cent live in the district where they teach; the other 10 per cent live mostly in near-by towns. But many declare the living conditions so bad that they "must give up teaching in the country or ruin their health." The trouble is that well-to-do farmers seldom care to be bothered with an extra boarder, and the homes of the poor are not fit for young persons who have probably been reared under more satisfactory conditions. The solution lies in the erection of modern teacherages as an integral part of the school plant.

Academic and professional preparation.—The village teachers have had better academic preparation than the rural teachers. It appears that some of the teachers reporting have not completed their elementary-school course. Most of these have, however. been enabled somehow to continue their studies in high school. Of the rural teachers, 58.3 per cent, and of the village teachers, 76.2 per cent, have completed a four-year high-school course. In high-school preparation the South Dakota teachers compare favorably with those of other Middle Western States. Unfortunately, very few have pursued college studies. The few in the rural-village group who are credited with college work are almost exclusively from the denominational colleges of the State.

Of the rural teachers, 45.8 per cent, and of the village teachers, 35.1 per cent record attendance in regula rcourses at professional schools. There is no explanation at hand why the village teachers should make a lower showing than the others. Of rural and village teachers, 54.2 per cent and 64.9 per cent, respectively, have entered the profession by the examination route instead of coming from the normal schools and the colleges of education. Figure 20 gives the places and institutions where the professional preparation was acquired. Almost one-fourth of the teachers responding came from other States. Of the rest, the normal schools at Aberdeen and Madison prepared almost one-half.

It is now generally accepted that no person should be allowed to teach in the schools unless he has completed a high-school course of four years, or its equivalent, and has had in addition a liberal professional training of at least two years. South Dakota is far from this minimum standard now; particularly is it true of the teachers' professional preparation. The plan of teacher training and teacher certification should be so arranged that certificates to teach would be issued by the State department only on credentials from teacher-

PLACE WHERE SOME SOUTH DAKOTA RURAL AND VILLAGE TEACHERS ACQUIRED PROFESSIONAL TRAINING

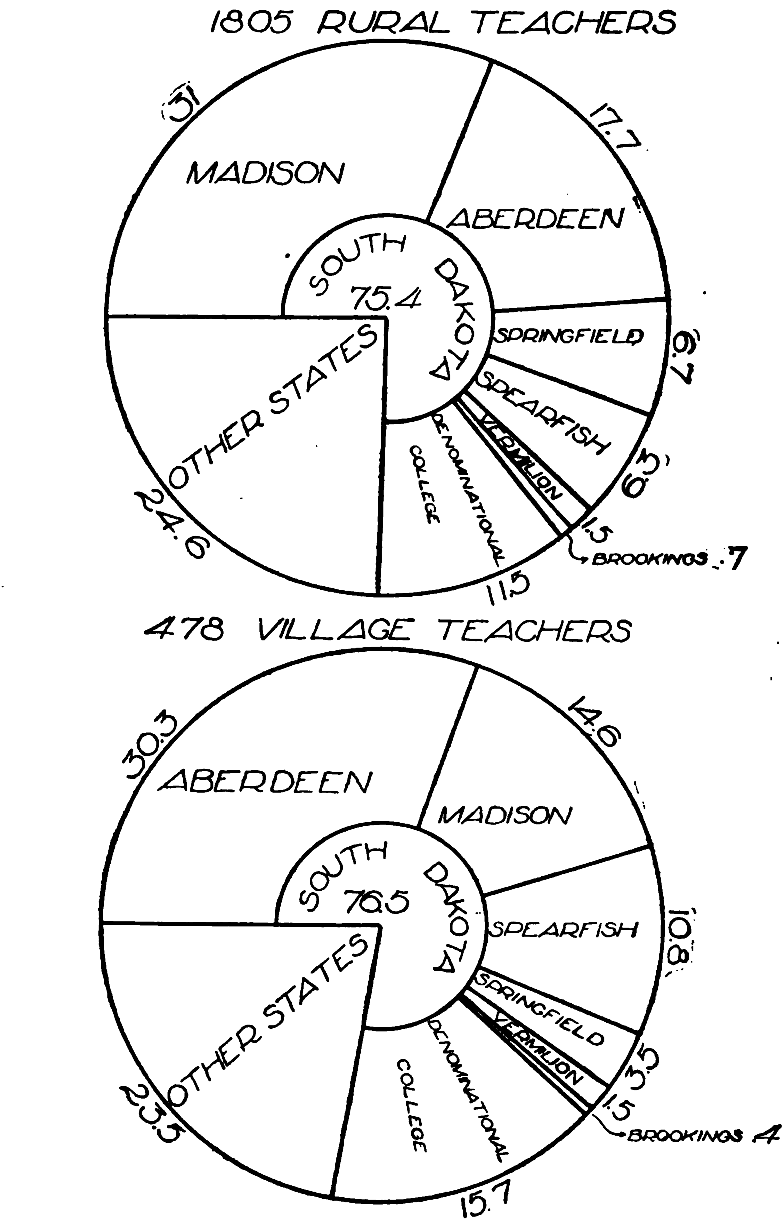

FIG. 20.

training schools. As soon as possible, certification based on public examination should cease. Not till such time can the profession become truly professionalized.

System of certification.—The system of teacher certification used in the State is sound. All regular certificates are issued by the State department of education, through its certification division. The county superintendents may issue "special" certificates "to applicants who present satisfactory proof that they were unable to be present at the last regular public examination." The special certificates are valid only "until returns are made for next public examination for regular certificate of equal rank."

The regular certificates issued are[1]—

1. *Life diploma*—granted on examination and to graduates of the University of South Dakota and approved colleges, and of the South Dakota normal schools in courses of at least two years beyond high-school graduation.
2. *State certificate*—granted on examination and to graduates as in case of the life diploma. Range of examination, length of experience, etc., more limited than in above.
3. *First-grade certificate*—granted on examination and to graduates of certain courses in the State normal schools and accredited colleges.
4. *Second-grade certificate*—granted on examination, and to graduates of certain limited courses in the State normal schools and accredited colleges.
5. *Third-grade certificate*—granted to those who pass a satisfactory examination in orthography, reading, writing, arithmetic, physiology and hygiene, geography, grammar, United States history, civil government, South Dakota history, didactics, and drawing. The minimum grade required in any one subject is 60 per cent; required average, 75 per cent. No experience required. Certificate valid for one year only and is not renewable. On reexamination two such certificates only may be held.

There seems little excuse for continuing this grade of certificate. The second grade is certainly low enough. The same subjects are included in the examinations for both certificates, with the difference that for second grade the candidates must reach an average of 80 per cent, with no one subject below 65 per cent. The second-grade certificate ought to be established as the lowest grade of examination certificate until such time as certification through examination is abandoned altogether.

6. *Primary certificates*—granted on examination only.

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[1] For details of conditions under which these certificates are issued to the normal schools and colleges, see Chapters XVIII and XIX.

7. *Vocational certificates*—granted on examination to special subject teachers of cities and other independent districts.

Figure 21 shows that the chief dependence of rural teachers is on the second-grade certificate, 56.56 per cent of them teaching on this grade. Of the village teachers, 37.1 per cent hold State certificates. This is none too good a showing.

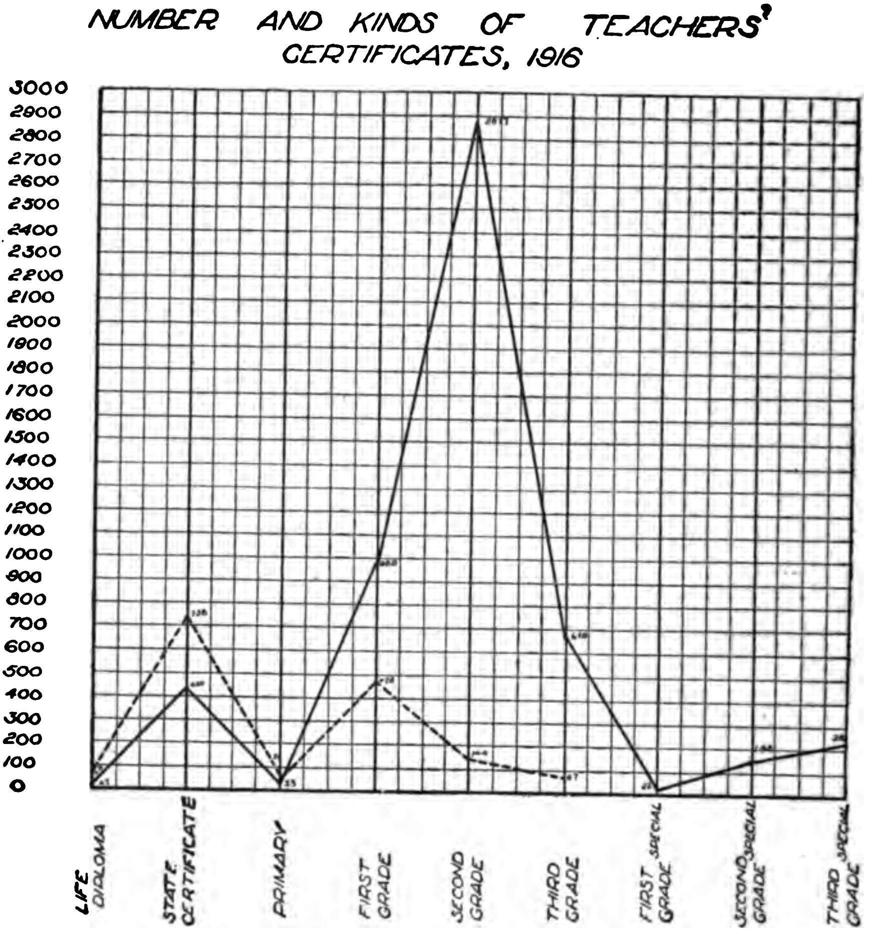

FIG. 21.

The solid line indicates rural teachers and the broken line village teachers

Compensation of rural and village teachers.—What compensation do the teachers receive? What, if any, is the relation between teacher preparation and efficiency, and teacher remuneration?

The salaries recorded (fig. 22) from the questionnaires are for the school year, which ranges from five to nine or more months. It should be kept in mind that the amounts herewith included are, as a rule, all that the teacher earns in the course of a calendar year, and must support him throughout the vacation period, which many progressive teachers devote to summer school attendance. It is true, many teachers are obliged to canvass for books, sell insurance, etc., during the summer months. If law or medicine were so poorly paid that its practitioners would be obliged to find some other source of income during the slack periods, how many would continue in the profession?

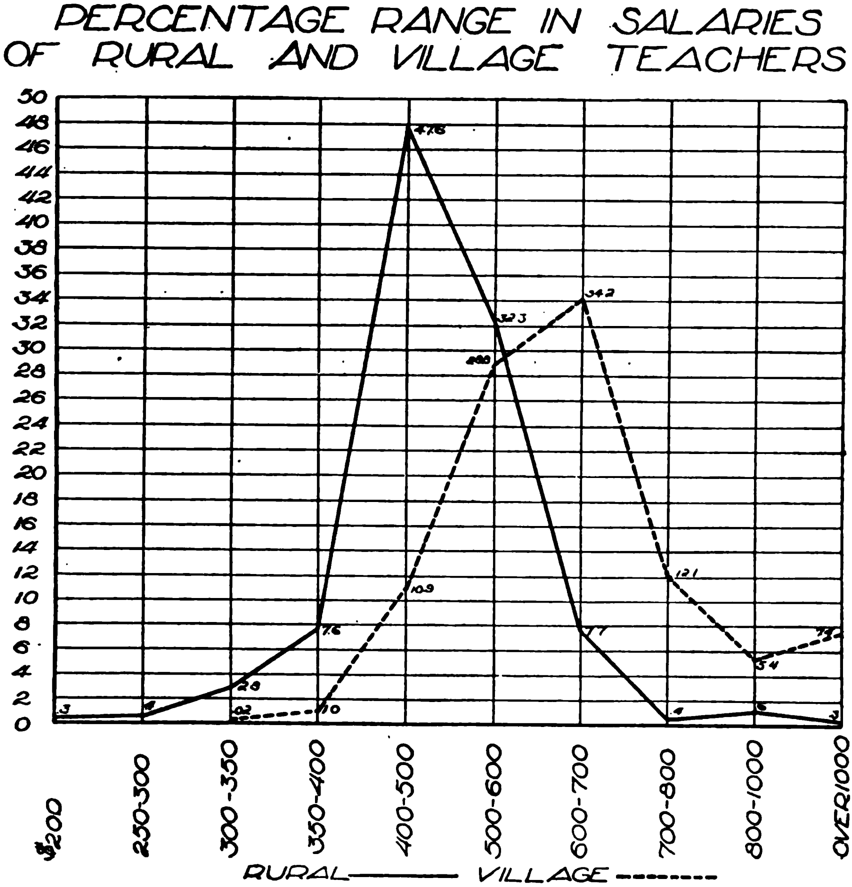

FIG. 22.

The largest number of South Dakota rural teachers receive between $400 and $500 per annum. This is much less than a hired hand gets. Of the village teachers, 34.2 per cent receive between $600 and $700. From this point the graph drops rapidly.

Teachers are paid entirely too low salaries any way one looks at the problem. It takes both courage and devotion to one's work to spend time and money on a thorough preparation, and then receive such beggarly returns on the investment. South Dakota should increase the teachers' salaries and make them worthy of the State. Other States are doing much better.

Table 92 shows conclusively that other Middle Western and Western States have all outstripped South Dakota in amount paid for salaries, and this State now stands lowest in the group of 23 States.

TABLE 91.—*Average length of school year in months, and average annual salaries paid public-school teachers (1915–16), North Central and Western States only.*

States.	Months.	Salaries.	States.	Months.	Salaries.
1. California	8.80	$998.45	13. North Dakota	8.63	$574.76
2. Washington	8.73	866.58	14. Kansas	8.19	572.60
3. Nevada	8.30	782.86	15. Missouri	8.09	559.74
4. Arizona	8.00	770.40	16. New Mexico	7.13	546.08
5. Illinois	8.20	750.85	17. Wisconsin	8.69	545.00
6. Idaho	7.75	742.81	18. Ohio	8.77	528.88
7. Utah	8.15	724.92	19. Minnesota	8.39	521.52
8. Montana	8.84	702.43	20. Iowa	8.50	517.65
9. Oregon	8.80	650.41	21. Wyoming	7.65	500.39
10. Colorado	8.35	632.85	22. Nebraska	8.18	438.45
11. Michigan	8.60	605.47	23. South Dakota	8.50	433.71
12. Indiana	7.75	580.32			

It is also suggestive to compare figures with salaries paid rural teachers in Saskatchewan, Canada. In a group of 1,982 teachers reporting, 46 receive from $600 to $700: 113 from $700 to $800; 838 from $800 to $900; 786 from $900 to $1,000; 199 from $1,000 up. Should South Dakota not do equally well?

Summary.—The problem of teacher supply, which has always been difficult, has become especially trying on account of the world war. Unless radical steps are taken by the State's educational leaders and the next legislature to improve teaching conditions by offering larger salaries, better housing conditions, and in other ways improving the status of the teachers, there will soon be a dearth of professional teachers. Eighteen counties were actually short of teachers when this survey was made, with conditions getting worse daily.

The State's teacher-training institutions have been unable to supply the schools with well-prepared teachers even under normal conditions. Many teachers have been attracted to the State from the outside, and many have come into the schools by the examination route, without any professional preparation whatever. The normal schools must be assisted to do a larger service than hitherto, and strong high schools should be drafted to help in the work.

Recommendations for professionalizing the teaching staff.—The greatest educational problem in South Dakota, then, is how to get and retain in the profession a sufficient number of well-prepared teachers. Before teaching can be thoroughly professionalized, several things must come to pass: The public must become fully awake to its responsibility toward the teachers; it must make the schools and housing conditions more attractive than they are; and in other ways make possible long, well-paid tenures in the same community. The State must, by legal enactment, safeguard the profession and offer special inducements to all teachers to equip themselves well for their profession and make it their life work. Finally, the teachers must do what they can to attain genuine professional standards of teaching.

To these ends the survey committee makes the following specific recommendations:

1. Improve teaching conditions by—
   - (*a*) Establishing reasonable minimum salaries for all teachers;
   - (*b*) Scaling all teacher's salaries to the grade of certificate held, thus placing a premium on special preparation.
2. Require higher teaching qualifications by—
   - (*a*) Increasing, gradually, the entrance requirements of the State normal schools and lengthening their study courses;
   - (*b*) Eliminating the third-grade certificate;
   - (*c*) Discontinuing the issue of certificates on examination as soon as the normal schools, the department of education in the university, and department of education of the State college, and other teacher-training institutions have become fully equipped to supply all the professional teachers required;
   - (*d*) Placing the minimum requirement for permission to teach at graduation from an accredited four-year high school, or its equivalent, and in addition, at least one year's professional study, acquired at a professional school for teachers. The standard to go into effect not before September, 1922.
3. Increase the supply of professional teachers by—
   - (*a*) Organizing teacher-training departments in not to exceed 20 fully accredited high schools well distributed over the State; the schools to organize the professional work in fifth-year courses, and to receive State aid;
   - (*b*) Establishing well-equipped departments for rural teachers at all the normal schools. (See p. 240);
   - (*c*) Enlarging the facilities of the State agricultural college to prepare teachers of general agriculture and teachers of vocational agriculture and home economics. (See p. 249);
   - (*d*) Granting State bonuses to teachers as rewards for long service in a single school community;
   - (*e*) Establishing a retirement fund for teachers.

The recommendations further detailed.—Every teacher who has devoted his time and money to preparing for teaching should be assured of a reasonable return on his investment. To this end the legislature should set a minimum of not less than $60 per month for the lowest-grade certificate.

Similarly, teaching rewards should bear a definite relation to the expense and time incurred in securing a higher certificate. Salaries ought, accordingly, to be based on the kind of certificate held. There should be a legal minimum salary for each kind. Thus the present second grade (the third grade not being considered) might receive the minimum of $60 and upward; first grade, 15 per cent additional and upward; State certificate, 15 per cent more than first grade and upward; and so forth.

Long service in a single school community is good evidence of tact and ability. Moreover, nothing is more detrimental to school progress than constant change of teachers and administrative policy. The State should make reward for long tenure in the same community. Several States have found this good investment. Thus a second year in the same school might be awarded with State aid to the amount of $5 per month; a third year with $10 per month; and a fourth and each subsequent year with $15 per month. It should be made unlawful for local boards to curtail local salaries by reason of these bonuses.

The fundamental reason for retirement pensions for teachers, as for any class of public employees, is the betterment of the service. The State is young and does not yet perhaps feel the need for retirement of superannuated teachers so strongly as some of the older States. By establishing an adequate pension system now, however, while the problem is still comparatively simple, nearly all the financial difficulties that beset retirement plans can be avoided. The exact details of the system should be worked out by a committee appointed by the governor, including both laymen and educators. It is essential that scientific insurance principles be allowed to control in the drafting of a law, and expert actuarial assistance should be employed from the outset. Any plan adopted should include financial support by both parties to the compact—the teachers and the State.

The third-grade certificate is a bid for immature and incompetent persons to gain entrance to the profession. Even on the plea of teacher shortage such certificates are untenable. The surest way to obtain a good teaching staff is to eliminate the incompetents, scale up teaching requirements, and add dignity and satisfaction to teaching by increasing its compensation to the level of modern living.

With proper financial support from the State and a reasonable enlargement of study courses and tightening of entrance requirements the State's teacher-training institutions should be able within five or six years to provide all the professional teachers required. When this time comes to pass certification through public examination should be discontinued, except that permits to teach may be issued to teachers from outside the State until their credentials can be validated.

The minimum requirement for teaching (four-year high-school course and two-year professional course) should not go into effect fully before September, 1923, in order to permit the teachers in service who may not now have these requirements to attain this minimum. The normal schools should establish a well-supported extension service to reach all teachers who can not do the study under the added requirement in residence. (For details see p. 238.)

All other recommendations are discussed in Chapter XVIII.

Chapter XVIII.

PREPARATION OF PUBLIC SCHOOL TEACHERS—THE STATE NORMAL SCHOOLS.

Section 1. FUNDAMENTAL PREMISES.

The State maintains four normal schools whose function is to prepare teachers for the public schools. These schools are the chief source of teacher supply in the State. The University of South Dakota supports a department of education which devotes its energies, in the main, to preparing high-school teachers, school administrators, and superintendents, and special-subject supervisors. The State College of Agriculture also gives courses in agricultural and related phases of education to students of college rank. In addition to the above, several denominational colleges and academies are accredited under law to offer educational courses, on the completion of which certificates are granted by the department of education. Finally, several of the larger high schools have begun, in a small way, to offer educational courses for elementary teachers.

The teacher-training program determined largely by legislative enactment.—Neither the normal schools nor the other higher State schools are limited by the legislative acts creating them to preparing a specified grade or grades of teachers. The function of each school has become delimited, largely through statutory legislation, under which students of the several schools may receive professional State and lower grade certificates upon completion of specified courses of study. The State board of regents of education have also followed a consistent policy of limiting the major activities of the normal schools to the large elementary field in education and the other higher State schools to the secondary field. The real anomaly in the educational field are the denominational colleges, which have the legal right to issue certificates, after approval by the State department of education. Some of these schools have virtually the same, and in some respects greater, privileges than have the normal schools, with their much larger professional equipment. That the limitations which are placed upon the schools may not in every respect redound to the best interests of teacher training in the State will appear later in this chapter. Before proceeding with the discussion of the several schools, however, the committee desires to state what appears to be good national policy in regard to the functions of the several State schools in teacher preparation.

The largest, and in many respects the most important, function of normal schools is to prepare an ample number of rural and other elementary teachers. For this task the normal schools are admirably adapted. Their teaching force and physical equipment have been selected for this purpose, and their general professional atmosphere has developed with this purpose in view, namely, the preparation of elementary teachers. This should not be construed, however, to mean that normal schools may not be permitted to realize the praiseworthy ambition and prepare subject supervisors and even high-school teachers, if they have their chief function well mastered, and if the State otherwise can use the service of the normal schools to good advantage in this field. If, by way of illustration, it appears that the university and colleges of the State, by reason of poor location or for other reason, can not supply the required number of high-school teachers, it would seem only reasonable to encourage one or more of the normal schools to assist in this work, provided, as before stated, that their other more important function be well looked after.

In the eastern States, notably in New England, the line is clearly drawn. Here the normal schools limit their activities to preparing elementary-school teachers. In other sections of the country the lines have not been drawn so close. The explanation is that in the Middle West, West, and to a lesser degree in the South, the normal schools have grown up contemporaneously with the State universities and colleges and have often become well established as the chief institutions for preparing all grades of teachers, while the universities centered their energies on organizing their schools of arts and science. Here and there the normal schools have developed into colleges of education, competing for prestige and patronage with the schools of education in the universities and colleges.

The comparatively large and expensive laboratory equipment required for adequate preparation of high-school teachers, administrators, and supervisors is already at hand in the universities and larger colleges, which is a consideration to be remembered when determining the field and functions of the schools. Without question, the universities and colleges are by reason of their organization and equipment the logical institutions to supply teachers for secondary schools and school administrators and supervisors.

The survey committee wishes to summarize the fundamental purposes and limitations of the teacher-training schools in an average State in the following brief terms:

1. The State normal schools are by organization and educational traditions best fitted to prepare every grade of elementary school teachers. This should be their chief function.

2. The university and college have the equipment and scholastic atmosphere necessary for adequate preparation of teachers for higher grades of work. They should accordingly limit their function to supplying secondary school teachers and school administrators and supervisors.

3. These limitations may be modified so far as the normal schools are concerned to include also preparation of special subject supervisors and even high-school teachers—

(*a*) Whenever it appears that the normal schools are fully occupying the elementary school field and have the time and equipment to give this type of instruction advantageously; and

(*b*) Whenever it appears that the universities and colleges of the State can not for good and sufficient reasons alone cope with the problem of supplying these teachers.

The State should determine the functions and limitations of the normal schools and schools of education.—As stated above, each of the South Dakota teacher-training schools has hitherto been held to a definite field of activity indirectly by legislative enactment and directly by decree of the board of regents of education. Unfortunately neither the normal schools nor the university and accredited colleges have been able to supply the large number of teachers that are required to man the schools. The normal schools graduate yearly good size classes for the elementary schools and small high schools, but the numbers are entirely too small to meet the demand. The university and the colleges each year send forth a few teachers who have majored in education in the regular college courses and some who have pursued regular normal school courses.

The tabulation given below contains the whole number of students graduated in 1917. The total number is 686. Of these, however, 125 are not teaching, leaving as net total in the schools 561, or about one-fourth the number required to fill vacancies occurring in the schools. Assuredly, many other teachers have gone out from these institutions during the year, have taken partial courses, or summer-school work; but these can not be classed with the professionally prepared teachers.

TABLE 92.—*Graduates of accredited teach-training schools in South Dakota, 1916–17.*

Institutions.	Total number of graduates.	Where teaching.				Total number not teaching.	Total number teaching.
		Rural.	Village.	City.	Place not given.		
Northern Normal and Industrial School.	243	80	45	33	19	66	177
State Normal School, Madison	133					40	93
State Normal School, Spearfish	44	22	9		3	10	34
State Normal School, Springfield	44	25	7	2		10	34
University of South Dakota	7			7		0	7
State College of Agriculture	17		3	12		2	15
Dakota Wesleyan University	31	7	15			9	22
Huron College	21	4	4	7		6	15
Yankton College	22	5	9	3		5	17
Lutheran Normal School	38	25	3			10	28
Augustana College	23	10	4		3	6	17
Sioux Falls College	6		2			4	2
Wessington Springs Junior College	27	13	7		4	3	24
Ward Academy	24	20	4			5	19
Totals	680	211	112	64	29	176	504

Section 2. THE STATE NORMAL SCHOOLS.

Normal school control.—The normal schools are under the general control and management of the State board of regents of education. This is preferable to one board for each school. In one respect alone does this board fail to reach the best results of administrative efficiency, viz, in the manner of organizing its standing committees of two members for each higher institution, the chairman of each committee becoming, through professional courtesy, the controlling power in his particular school. This plan of standing committees is provided to expedite business and to look after local details. The survey committee believes that business details of this kind now looked after by the standing committees should be handled through the executive division of the State department of public instruction, whose chief might be made the permanent paid secretary of the regents. It would also be highly desirable that the pay rolls and certain other business matters of the higher institutions be attended to by the regents through the same division. This change is suggested to remedy the prevailing practice of circulating vouchers and other papers for approval and signature, which has been the cause of serious delay in payments of salaries and current expenses. It would also provide the regents with a permanent business office in the State capital.

Location of normal schools and distribution of students.—Two of the normal schools are well located geographically; the other two are, unfortunately, located on the borders of the State and not easily accessible. The Northern Normal and Industrial School is situated at Aberdeen, at the center of a network of railway lines, which make it easy to reach from every part of the State. The accompanying map shows graphically that this institution draws its student body from every section of the State, more uniformly even than does the University of South Dakota.

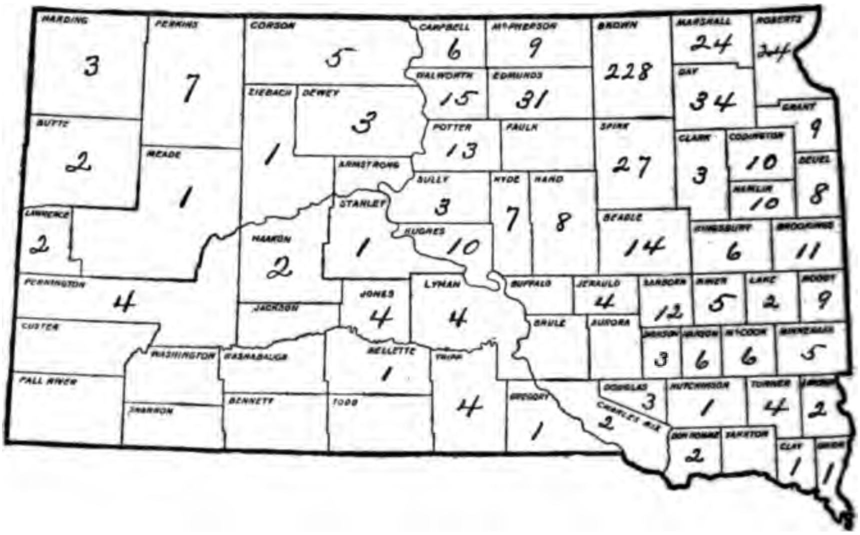

FIG. 23.—Map of South Dakota showing distribution of students in attendance at the Northern Normal and Industrial School at Aberdeen for the school year 1916–17.

The State Normal School at Madison has reasonably good railway facilities and has the advantage of being only a half-hour's travel from the metropolis, Sioux Falls. It is in the heart of a rich agricultural section, which should be a determining factor in the

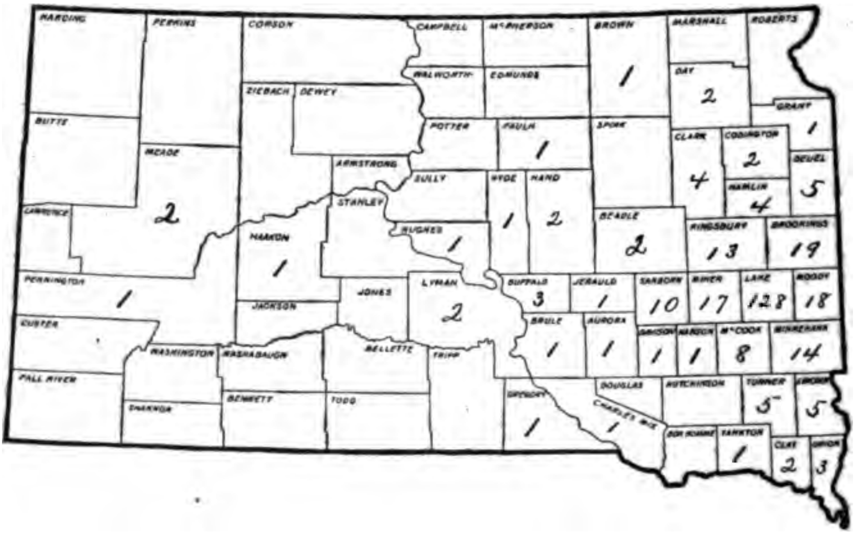

FIG. 24.—Map of South Dakota showing distribution of students in attendance at the State Normal School at Madison for the school year 1916–17.

organization of its work—the specialized preparation of rural teachers. This school has not attracted students so uniformly from the different counties as has the school at Aberdeen, partly because it has not been so well supported financially, and probably also because it has not taken advantage of its opportunities as they have come.

The State Normal School at Spearfish is the teacher-training school of the Black Hills section of the State, and its drawing power is largely limited to that area. The school is attractively situated, in healthful surroundings. It is difficult to reach by rail, but with the advent of the automobile stage this drawback is no longer of serious consequence.

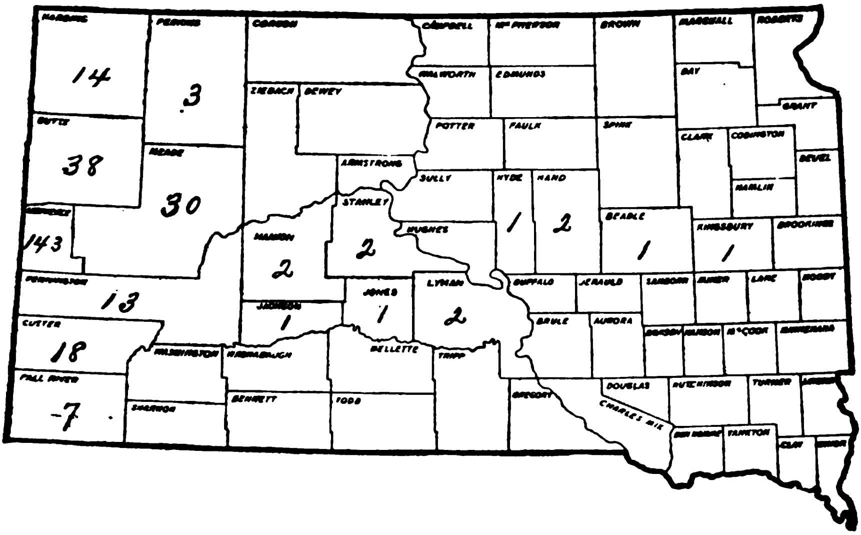

FIG. 25.—Map of South Dakota showing distribution of students in attendance at the State Normal School at Spearfish for the school year 1916–17.

The State Normal School at Springfield is the most unfortunately located of all the schools, lying, as it does, on a little-traveled branch line on the extreme southern border of the State. Its drawing power is decidedly local, a large majority of the student body being from Bon Homme County.

Were it not for the urgent demand for larger and still larger numbers of teachers prepared in normal schools the committee would feel justified in recommending that the school at Springfield be closed, and that the school at Spearfish be moved to a more accessible center in the Black Hills. This matter has been agitated in the State from time to time, probably to the detriment of the schools in question. The committee does not now feel justified in recommending the discontinuance of either of these normal schools, but wishes to recommend instead (see end of chapter) certain changes in the activities of the institutions which may increase their immediate usefulness.

Who the normal-school students are.—Table 93 is compiled from data procured from the students of the four schools, called together solely for this purpose. The total number answering includes all in attendance except chance absentees and a few groups of practice students who were unable to leave their charges. The outstanding point of interest is that three-fourths of all the students were reared on the farm, their parents still making their living from the land. In a total of 1,209 students answering, only 852 intend to become teachers. This shows clearly that the schools are being utilized for academic purposes to an unusual extent. It is surprising to learn that the school at Aberdeen, which has charter rights to give industrial instruction in addition to its normal courses, has a larger percentage of students who expect to teach than either of the other schools. The percentages of students not intending to teach are, Aberdeen, 21.78; Springfield, 26.21; Madison, 34.40; and Spearfish, 37.90. The school at Spearfish draws many students from villages and the ranching country where there are no high-school facilities. It is the only high educational institution of any kind in the Black Hills, aside from the school of mines; as such it has unquestionably served a good purpose. Here is seen another argument for establishing a junior college in this section (see p. 257). It is not easily explained why so many students at Madison should not wish to teach. Springfield and Spearfish supply high-school facilities for their

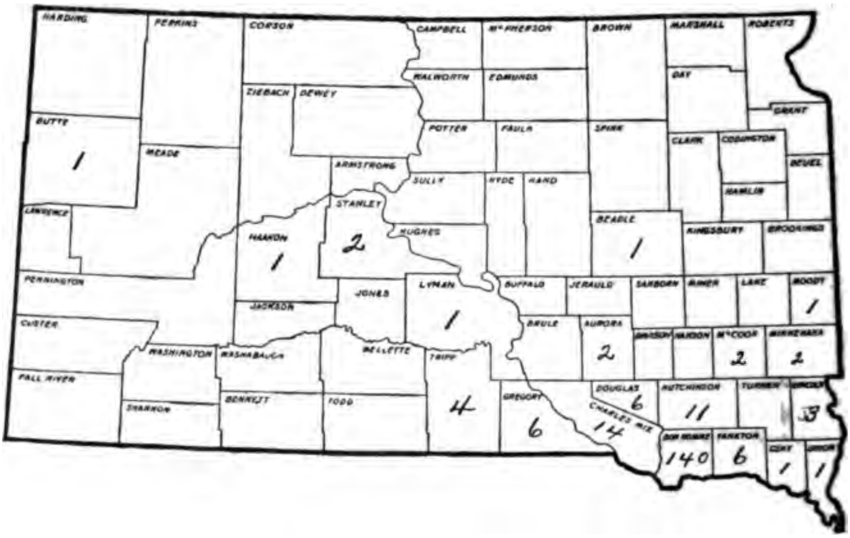

FIG. 26.—Map of South Dakota showing distribution of students in attendance at the State Normal School at Springfield for the year 1916–17.

respective villages, which further accounts for the large academic student body that does not expect to become teachers.

TABLE 93.—*Data pertaining to birthplaces, preparation, and probable teaching position of students in South Dakota normal schools.*

Data pertaining to students.	Name of normal school.				Total.
	Aberdeen.	Madison.	Spearfish.	Springfield.	
Number reporting	485	250	309	165	1,209
Where born:					
On the farm	353	180	160	118	811
In town	88	49	126	37	300
In the city	41	21	22	9	96
Not reporting	0	0	1	1	2
Total	485	250	309	165	1,209
Guardian's occupation:					
Farmer	337	184	200	120	841
Business	85	37	58	24	204
Professional	18	9	12	12	51
Artisan	34	20	38	8	100
Not reporting	11	0	1	1	13
Total	485	250	309	165	1,209
Intend to teach:					
Yes	377	164	190	121	852
No	105	86	116	43	350
Not reporting	3	0	3	1	7
Total	485	250	309	165	1,209
Intend to make teaching permanent occupation:					
Yes	312	164	144	75	695
No	142	86	161	49	438
Not reporting	31	0	4	41	76
Total	485	250	309	165	1,209
Where they expect to teach:					
In the country	217	151	142	108	618
In town	164	48	44	13	269
Not reporting	104	51	123	44	322
Total	485	250	309	165	1,209
Kind of teaching:					
Elementary	90	67	153	12	322
Intermediate	92	11	29	13	145
High school	30	16	21	3	70
Rural school	157	75	81	93	406
Supervisor	11	0	1	0	12
Not reporting	105	81	24	44	254
Total	485	250	309	165	1,209
Desire to make rural teaching life's calling:					
Yes	86	33	154	43	316
No	355	166	130	80	731
Not reporting	44	51	25	42	162
Total	485	250	309	165	1,209
Under changed conditions would make rural teaching life's calling:					
Yes	175	89	111	87	462
No	266	110	70	33	479
Not reporting	44	51	128	45	268
Total	485	250	309	165	1,209

The students hope to teach in all grades of schools—rural, other elementary, intermediate, and high school, and as special supervisors. It is noticeable that the largest number expect to *begin* teaching, at least, in rural schools. Perhaps the most outstanding fact in the table is that, while so many were born and reared in the country, very few desire to teach there out of choice. This speaks volumes. But very many more express a desire to teach there under improved educational conditions. Apparently, then, the normal schools will be able to supply many more good rural teachers as soon as the public becomes aware of its responsibilities toward the profession.

Academic preparation and age of the students.—Table 91 gives the academic preparation at admission and age at completing the present course. In a total of 1,209 students, 603 come direct from the eighth grade. This is because many communities have little or no high-school facilities. It is gratifying that the next largest group (254) are graduates from four-year high schools. The ages of the students range according to expectation. Three groups (15, 16, and 17 years) will not yet have reached legal teaching age when the to the group not expecting to teach.
course is assumed to be completed. Many of these, no doubt, belong

From the above study these facts may be deduced:

(1) Students attending the normal schools do not all expect to teach.

(2) Very many rural-born students shun teaching in the country, knowing from their own childhood experiences the meagerness of teaching opportunities.

(3) Many rural-born students would be glad to teach in the country if teaching conditions were improved.

(4) The normal schools extend a service to communities without high-school facilities which might be done to better advantage by rural high schools, State junior colleges, and denominational colleges.

(5) The mass of the student body are too young to give the normal schools that atmosphere of maturity and professional seriousness which marks the students in the other State colleges.

TABLE 94.—*Data pertaining to entrance qualifications, ages, etc., of South Dakota normal school students.*

Qualifications and ages.	Name of normal school.				Total.
	Aberdeen.	Madison.	Spearfish.	Springfield.	
Number of years completed above eighth grade at time of entering normal school:					
None	177	127	184	115	603
One	41	26	42	25	134
Two	60	38	31	11	140
Three	22	2	19	6	49
Four	163	57	27	7	254
Five	12				12
Six	4				4
Not reporting	6		6	1	13
Total	485	250	309	165	1,209
Age at time of completing present course:					
Fifteen	2	1	0		3
Sixteen	7	5	0	5	17
Seventeen	20	27	16	22	85
Eighteen	116	81	66	53	316
Nineteen	81	57	70	44	252
Twenty	90	40	55	19	204
Twenty-one	60	16	50	9	135
Twenty-two	33	9	21	3	66
Twenty-three	31	1	11	4	47
Twenty-four	17	2	5	2	26
Twenty-five	10	2	6	0	18
Twenty-six	2	2	2	1	7
Twenty-seven	7				7
Twenty-eight	4				4
Twenty-nine	3				3
Thirty					
Thirty-one					
Thirty-two					
Thirty-three					
Thirty-four	1				1
Forty-two	1				1
Fifty-four			1		1
Not given		7	6	3	16
Total	485	250	309	165	1,209

Justification for the presence of academic students in the normal schools.—Of the 603 students reporting normal-school entrance direct from the eighth grade, many are registered in the elementary and intermediate courses and expect to become teachers, but a number of students are in attendance to acquire an academic education. The normal schools are justified in making provision for such students coming from communities without high-school facilities, who wish to pursue the normal-school courses, since it would be impossible otherwise to obtain a sufficiently large number of academically prepared students for the professional courses. On the other hand, the normal schools should refuse to accept purely academic students who could just as well acquire instruction elsewhere.

TABLE 95.—*List of graduates from the normal schools, 1917, and their present occupations.*

Schools.	Course completed.	Enrolled.	Present occupations.													
			Teaching.													
			Rural.	Village.	City.	Place unknown.	Total.	Attending school.	Home work.	Married.	Enlisted.	Government service.	Clergyman.	Deceased.	Not given.	Total.
Aberdeen	Advanced	60	12	20	15	3	50	3	...	...	...	1	1	...	5	60
	Normal manual training.	2	...	1	1	...	2	...	...	...	...	...	...	...	0	2
	Normal household arts.	8	...	2	1	1	4	1	...	1	...	...	...	...	2	8
	Drawing supervisors	3	...	1	2	...	3	...	...	...	...	...	...	...	0	3
	Music supervisors	1	...	...	...	...	0	1	...	...	...	...	...	...	...	1
	Primary and kindergarten.	16	2	3	7	3	15	1	...	...	...	...	...	...	...	16
	Advanced industrial	3	...	...	1	...	1	1	1	...	...	...	...	...	...	3
	Intermediate normal	98	37	17	6	12	72	5	1	1	1	...	...	...	18	98
	Elementary normal	52	29	1	0	0	30	3	...	1	...	...	...	1	7	52
	Total	243	80	45	33	19	177	15	2	3	1	1	1	1	32	243
Madison	Advanced	14	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Advanced primary	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Intermediate	75	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Elementary	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total	133	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Spearfish	General	4	...	...	...	1	1	1	1	...	1	...	...	...	0	4
	Advanced	37	...	...	...	33	33	1	2	...	1	...	...	...	0	37
	Commercial	2	...	...	...	...	0	...	1	...	...	1	...	...	0	2
	Home economics	1	...	...	...	...	0	...	1	...	...	...	...	...	0	1
	Total	44	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Springfield	Advanced	18	...	...	...	11	11	4	1	...	2	...	...	...	0	1
	Intermediate	15	...	...	...	12	12	2	...	...	1	...	...	...	0	1
	Elementary	11	...	...	...	11	11	...	...	...	...	...	...	...	0	1
	Total	44	...	...	...	34	34	...	...	...	...	...	...	...	...	...

It is deemed highly advisable by the survey committee that th students and courses should be reclassified gradually, so that ultimately all students of less than high-school graduation be ranked as prenormal students and grouped in a prenormal academic department. This can be realized as soon as the professional courses are lengthened to one, two, or three years above high-school graduation instead of, as now, above eighth-year graduation.

Finally, the normal schools at Spearfish and Springfield are justified in furnishing their respective villages with high-school facilities through the medium of their practice schools and the elementary courses, because without this arrangement it would be impossible for either school to maintain its required practice school and because these students pay the required tuition fee.

Uniformity of fundamental courses in all the normal schools.—In 1911 the State legislature enacted a new law relating to granting teachers' certificates. Under its provisions second and first grade certificates, five-year State certificates, and convertible two-year provisional certificates are now issued by the State department of public instruction to normal school and other accredited school students of prescribed age and attainments without examination. This is a long step in the direction of placing teaching on a professional basis.

The normal-school courses are planned to comply with the requirements of this law. They comprise three main courses—the elementary, intermediate, and advanced. The first of these meets the requirements for the second-grade certificate and embraces two years of study above the eighth grade; the intermediate course leads to first-grade certificate and embraces four years of study above the eighth grade; the advanced course leads to a life certificate and embraces six years above the eighth grade.

The schools, further, have a one-year course for high-school graduates, leading to first-grade certificate. In addition to all these courses, each institution offers certain other courses sanctioned by the regents and approved by the State superintendent. They appear in Table 95, which contains the number enrolled in each course, the kind of school in which teaching, and other occupation if not teaching.

Organization of study courses at Aberdeen.—The Northern Normal and Industrial School was organized in 1901. The object of its establishment was "to give instruction to persons of both sexes in manual training and in the industrial and mechanical trades, arts, and sciences and the allied branches of learning." The act creating the school is comprehensive and might be construed in such broad terms as to make it a competitor of the university and the agricultural college. This would have been unwise in the extreme. Fortunately, whatever ambitions the school may have had under former administrations have been directed wisely by the regents, with the result that the institution is satisfied to develop as a normal school, laying exceptional stress on the industrial subjects. In some particulars, however, the committee believes the school would do well to modify its study courses. The following is a statement of the present study courses:

ADVANCED.

(Six years from eighth grade.)

Normal, leading to diploma of graduation and to the State certificate and life diploma.*

(*a*) General course.
(*b*) Normal-manual training.
(*c*) Normal-music supervisor.
(*d*) Normal-household arts.
(*e*) Normal-drawing supervisor.
(*f*) Normal-primary and kindergarten.

Industrial, leading to diploma of graduation and accrediting to junior university standing.

(*a*) General course.
(*b*) Manual training.
(*c*) Domestic arts.

INTERMEDIATE.

(Four years from eighth grade.)

Normal, leading to second-grade teachers' certificate. valid for three years.
Industrial, preparatory to technical or engineering courses.

ELEMENTARY.

(Two years from eighth grade.)

Normal, leading to second-grade teachers' certificate, valid for two years.
Industrial:
- (a) Trade courses.
- (b) Commercial course (may be completed in 36 weeks).
- (c) School of agriculture (may be completed in winter terms comprising 38 weeks).

These courses have been approved by the State board of regents of education and by the department of public instruction, subject to the following general regulations:

On permission of the committee on extra credits, students may take 25 hours' work each quarter, this being the maximum amount permitted in any case. Thus the way is opened for 15 hours' additional elective work each year. (Regents' resolution and educational department ruling.)

These differentiated courses, which are taken from the 1916–17 calendar of the school, group all subjects as "normal" and "industrial" with subdivisions under advanced, intermediate, and elementary courses.

The general advanced course in the normal group represents six years of study above the eighth grade and "leads to full junior standing in the leading universities." The committee believes that this course should be abandoned. Young people who plan to attend university or college should enter those institutions as freshmen. Moreover, as a normal school is a unique, professional school, differing in aim from the purely academic institutions, it can in no sense be considered as a college preparatory school.

Subcourses b, c, d, e, f in the normal group are all advanced six-year courses, intended to prepare teachers and supervisors in these subjects. The equipment of the school is ample for this particular phase of school work, which is done so meagerly in the other higher institutions that the committee believes all these courses ought to be retained and strengthened by increasing, gradually, the entrance and graduation requirements, as discussed elsewhere.

The intermediate and elementary normal courses are discussed later under "Proposed courses and standards." The industrial courses are seven in number, including advanced, general manual training, and household arts courses of six years above eighth grade preparing for junior university standing, and several other intermediate and elementary courses of a commercial and trade-course nature. There is finally a school of agriculture, of 20 weeks' duration.

It is accordingly recommended by the committee that all the industrial courses be discontinued after the present war emergency has passed, and the equipment and facilities be utilized wholly for the industrial phases of the normal-school courses.

Organization of study courses at Spearfish.—This normal school maintains well-adapted advanced, intermediate, and elementary normal courses, as well as a three-year commercial course, and agriculture and industrial short courses of three years of 18 weeks each and a two-year vocational course for dressmakers and milliners.

It is unquestionably eagerness to serve their constituencies and a fear that people may otherwise go untaught that have tempted this and other normal schools to reach out and do work which does not legitimately belong in teacher-training schools. The committee believes that the vocational courses enumerated above have no legitimate place in a State normal school. It should be understood, however, that it is not the committee's intention to eliminate commercial, agricultural, and other industrial and vocational subjects from this or any other normal school, but rather to redirect the purpose of these subjects. Every normal school in the State should require a certain amount of instruction in bookkeeping, in farm accounting, in agriculture, etc., but the purpose should be to provide the State with better teachers rather than with expert accountants and professional milliners and agriculturists.

For this reason the committee recommends that all courses in the school not planned for teachers be discontinued.

Organization of study courses at Madison and Springfield.—These schools adhere quite closely to the courses of study outlined to meet the certification law of 1911. In addition to the professional two, four, and six year courses described above, Madison offers a two-year primary and kindergarten course for high-school graduates or the equivalent. The school is well equipped to do this work. Madison also offers a two-year course for rural teachers, open to eighth-year graduates. This course is too brief to prepare the right type of rural teacher. Furthermore, it is a course on paper only, as the school has not yet employed the necessary rural expert to have charge of the course, and no students are enrolled. The rural course should be reorganized and strengthened in accordance with the recommendations given later in this chapter.

Springfield offers, in addition to the regular elementary, intermediate, and advanced courses, a business course and special music instruction. The business course as advertised "gives to those who wish to engage in business pursuits an opportunity to fit themselves in a practical manner," etc. This goes clearly beyond the province of a normal school. The course should be discontinued, and the commercial subjects adapted to the needs of the regular professional students. All students should have an opportunity to include much public-school music in their courses and even to take private lessons; but the committee is inclined to think that private instruction is carried to an extreme in this school and urges that the tendency be curbed.

During the year several hundred teachers came to the State who had received their preparation in other States. However, these are offset by an almost equally large number of teachers leaving this State to teach in other States. To say, then, that 1,500 teaching recruits go into the schools annually with little or no professional preparation is probably not overstating the case, although final data are not available.

The State needs annually about 150 high-school teachers. A very small number were supplied by the university and the State college. The denominational colleges supplied a larger number, most of whom had had little or no real practice teaching. This educational field is not fully occupied. The normal schools send a fair per cent of their graduates into rural schools; the rest go into village and town schools and the nonaccredited high schools. But the numbers are wholly inadequate.

The best interests of the State seem to demand that—

(*a*) The facilities for preparing teachers in the normal schools be greatly enlarged; that to this end one normal school devote its energies chiefly to preparing rural teachers, and three schools to rural and other elementary teachers and subject supervisors.

(*b*) The best high schools in the State be authorized to prepare elementary teachers (see Chapter XIX) to provide elementary schools with the required number of teachers.

Proposed standards for the normal school.—When the nonprofessional courses are eliminated the normal schools can concentrate all their efforts on improving the regular normal-school courses. The professionalization of the teaching staff must ultimately be decided by, or at least through, the normal schools. The way to procure a permanent staff of good teachers is, paradoxical as it may seem, to increase entrance requirements and lengthen courses of study. For a person who invests a good measure of time and money in his professional education will be loath to abandon his own calling for other callings, as is such a temptation to people who have made no real sacrifice in preparation for this life work.

The committee proposes at this juncture to restate and lay down for the guidance of South Dakota a few of the standards that have been formulated by the United States Bureau of Education and set down as reasonable guides for other States:

1. The State should require certain definite academic and professional attainments of all teachers.

2. The entrance requirements of the State normal schools should gradually be raised to graduation from a four-year accredited high-school course.

3. The lowest grade of certificate to be issued by the normal schools after 1924 should represent two years above high-school graduation. After 1925 the normal-school diploma should be given only to those who have finished satisfactorily a full course of three years.

4. The ultimate standard of attainment for all persons teaching in the State should be graduation from an accredited four-year high school and at least two years of professional preparation.

5. The process of elimination should be gradual, to permit teachers in service to meet the new requirements without undue hardship.

6. The normal schools should organize thoroughgoing extension courses for the teachers in service.

7. The normal schools of this agricultural State should recognize a special obligation to provide appropriately trained teachers for rural communities.

8. The normal schools should offer differentiated courses of study representing two and three years above high-school graduation.

9. The principal function of the normal schools should be the preparation of elementary teachers for the rural and other elementary schools, while the principal function of the departments of education in the university and the colleges should be the preparation of high-school teachers.

Recommendations for securing these standards.—To secure the establishment of the first six of these standards the committee recommends:

(*a*) That, beginning with the fall term of the school year 1920–21, the first year of all the courses (being the ninth year in the public-school course) as now given be discontinued, and that for that year the minimum requirement for admission to any regular course of the normal schools be made the completion of one full year of the course of an accredited high school or its equivalent.

(*b*) That, beginning with the fall term of the school year 1921–22, the second year of all the courses of study as now given be discontinued, and that each year thereafter an additional year shall be discontinued until by the fall term of the school year 1924–25 only graduates from fully accredited high schools, or the equivalent, be admitted to the regular courses in the State normal schools.

(*c*) That when the new entrance requirements begin to be realized the State normal schools may organize prenormal-school departments of an academic nature for students from sections of the State without good high-school facilities, provided that these prenormal-school departments be abandoned as soon as high-school distribution shall have become ample.

(*d*) That after the close of the spring session of 1924 all normal-school certificates or credentials given for the completion of courses representing less than two years of study after the completion of a high-school course of four years be discontinued.

(*e*) That after the close of the spring term of 1925 the two-year course normal-school diploma be awarded for the completion of a two-year full course above high-school graduation, and that the advanced normal-school diploma be awarded for completion of three-year courses above high-school graduation only.

(*f*) That, since there are in the service of the rural and other elementary schools of the State many teachers of less academic and professional preparation than will be required by the higher standards in use after 1925, special provision be made at the summer sessions of the normal schools for these teachers, and that such irregular courses be offered as may be necessary to meet their needs.

(*g*) That all such teachers be required to attend the summer session of some normal school, university, or accredited college to attain the new standards; or, in lieu thereof, to meet these standards through study at the study centers organized for this purpose (see next paragraph below).

Training of teachers in service.—The responsibility of the normal schools does not stop with the graduation of their teachers-in-training. If teaching is to be a definite profession, the teacher-in-service must continue to receive professional direction from the normal schools. To this end each of the four South Dakota normal schools should organize an extension service, each operating within its own normal-school extension district, the boundaries of which may be determined by the State board of regents or by the administrative heads of the four schools. The purpose of this extension service should be twofold: (1) To assist all teachers now in service to attain the gradually increasing requirements under the new standards. (2) To provide advanced work for normal-school graduates now in service.

It would be unfair for the State to require the higher certification standards proposed above and not to offer the means by which these requirements could be attained without temporarily abandoning the teaching field. Some of the teachers in the service of the State are mature instructors with families and others depending on them for support, which would prohibit actual school attendance on their part. To reach this large group of teachers is the primary purpose in recommending an extension service in the normal schools. The committee feels that this extension work can be made an important part of the normal-school service to the State. A director of extension should be appointed for each school with a sufficient number of assistants to establish week-end study centers within convenient reach of the teachers.

A similar extension service has recently been recommended by the Bureau of Education in its surveys of the educational systems of Washington, North Dakota, and Arizona. The details of the service must be conducted in the manner best suited to the needs of each extension district and the State. The committee believe that a modified form of the so-called "Iowa plan" organized by the Iowa State Teachers' College for that State, would meet the South Dakota requirements.

Advanced work for graduates.—Graduates from the professional courses of the several State normal schools receive a normal-school diploma granted for life, which entitles the holder to teach without examination in any public school in South Dakota. Unfortunately, graduation from a normal school, however good, is no guarantee that the students will make successful teachers. Certain European countries never grant permanent certificates until the candidate has served a successful apprenticeship of two or more years, during which much time must be devoted to professional reading under Government direction. The committee believes that the professional standards of all teachers would be greatly improved if provisional licenses only were granted on the basis of normal-school diplomas, but that these licenses should be converted into life certificates after the graduates shall have proved both their ability to teach and their willingness and ability to carry forward cultural and professional study without the constant oversight of teachers and other school helps. To this end the committee recommends an extension service for normal-school graduates much like the service proposed by the Bureau of Education in its educational surveys of Washington, North Dakota, and Arizona, namely:

(1) That for all graduates of the normal schools who hold diplomas valid as certificates to teach in the State the State department of public instruction shall, with the assistance of the presidents of the normal schools and the heads of the departments of education in the university, prepare thoroughgoing courses of study, including both professional and cultural subjects, which may be completed within a period of three years from the time of beginning study; that examinations on portions of these courses be held from time to time; and that no person receive a permanent license to teach in the public schools of the State until after he has passed a final examination in all courses prescribed; the final examination should be passed not earlier than two nor later than five years after the time of leaving the normal school.

(2) That State, county, and city superintendents and supervisors be required to give special attention to young teachers who are pursuing these prescribed courses of study and have not yet received a permanent license to teach. Before granting the permanent license to any teacher the State department of public instruction should require a statement that such teacher has passed a satisfactory examination on the prescribed course of study, and also a specific report from a qualified superintendent, supervisor, or inspector that this

teacher has taught satisfactorily not less than 16 months in the schools of the State. And this report should be accompanied by detailed records of the work done within the past eight months, showing its excellence and defects.

(3) That the same policy in regard to permanent licenses to teach in the elementary schools of the State be pursued with teachers entering the service from other States. The first license granted to any such teacher should be a temporary license.

Specialized departments in which to prepare rural teachers.—The State requires about five rural teachers for each one needed in the towns and cities. The educational needs of the rural-school teachers have already been alluded to elsewhere, but the subject is important enough to warrant special discussion.

The tragic mistake has been to assume that rural teachers can get along with less preparation than is needed elsewhere. Consequently, inexperienced, immature, and half-taught persons have been pushed out into rural districts to teach, with the result that rural schools in many places do not provide the kind of education required by its patrons. It is not sufficient, therefore, that teachers in rural schools should have as much general education and professional skill as teachers in the elementary grades in town schools. In addition they need a wider range of knowledge in many subjects not necessary for the elementary teachers in town schools. Rural teachers must understand the underlying problems of country life and must have correct vision and point of view and zeal to undertake the trying tasks of modern rural teaching. This calls for many-sided specialized preparation which can not be acquired in the general pedagogical courses. Specialized departments in charge of rural life experts are necessary if the schools would solve this important problem. The courses offered must be practical and contain all the sciences that pertain to rural life; moreover, the courses must be made at least as long in time as the advanced courses preparing for teaching in town. Land and laboratories are needed in which to apply the course of study. There should also be a rural practice school of the consolidated type established in connection with each normal school, and other near-by rural schools might profitably be organized for rural observation purposes.

Teaching staff and class organization.—The following summary (Table 93) giving (1) the number of regular instructors, (2) salaries for the regular school year of three terms, (3) the average number of different subjects taught, (4) the average number of class periods per week for each instructor, (5) the average number of students per hours, and (6) the average number of student clock hours per week, furnishes an exact basis for a comparative study of the four State normal schools:

TABLE 96.—*Number, salary, and class work of the instructors of normal schools of South Dakota.*

Normal schools.	Number of regular instructors.	Average salary for regular school year.	Average number of subjects taught.	Average number of recitations per week.	Average number of students per class.	Average student clock hours per week.	Critic teacher and others not classed as regular.	Average salary of those not classed as regular instructors.
Aberdeen..........	33	$1,383.58	3+	18	27	410	2	$410
Madison..........	15	1,456.67	3+	14	35	466	14	374
Spearfish..........	23	1,293.50	3+	24	31	601	12	880
Springfield..........	14	1,121.43	3+	16	17	271	7	321
Average......	21	1,313.77	3+	18	28	437	9	496

The table should be studied in the light of the following standards for normal schools now generally accepted by students of education who have given serious study to the internal administration of this class of schools:

(1) The average salary of regular instructors should approach $2,000 per annum; the salary of practice school-teachers should approach $1,800.

(2) The number of classroom clock hours per instructor should not exceed 20 per week.

(3) The number of students per class should not exceed 30 or 35, except in lecture work.

(4) The average number of student clock hours carried by an instructor may reach 300 and 400, the reasonable load in any case being determined by the kind of work required.

The summary distinguishes between regular normal school instructors and critic teachers, assistants, part-time teachers, etc. Aberdeen has the largest number of regular instructors, and Springfield the smallest. The salaries average very low throughout and should be scaled up to the standards laid down in the preceding paragraph. The average number of subjects is about what it ought to be, as the schools are organized on a reasonably definite departmental basis.

The number of recitations per instructor average only 18 per week, which is less than the standard load. Spearfish alone averages above the standard. The same may be said about the average number of students per class. None can be considered too large, and Springfield carries classes that are unusually small. The average number of student clock hours is too high at Spearfish, because the instructors carry more than the standard requirement of recitations. Springfield is not running at full capacity; the other two schools carry about the correct load of student clock hours, although the figures are somewhat high, due to the large number of physical culture and music students included in the tables.

From the above it appears:

(1) That the normal school staffs are greatly underpaid.

(2) That staff members can not be said to be overloaded with work; indeed, the standards being about right with the exception of Springfield, which operates at about two-thirds capacity, due to the small number of students in attendance.

Section 3. MAINTENANCE, PHYSICAL EQUIPMENT, AND PRESENT NEEDS OF THE SOUTH DAKOTA NORMAL SCHOOLS.

(A) THE NORTHERN NORMAL AND INDUSTRIAL SCHOOL.

Physical equipment.—The general equipment of this school is adequate for good instruction. The grounds comprise 25 acres, situated on the outskirts of Aberdeen, platted to lawns, shrubbery, agricultural experiment plats, playgrounds, etc. Six buildings are used for school purposes, two being dormitories, devoted entirely to the use of young women. The central building contains laboratories, classrooms, and the library collections. The administration building, as signified in the name, contains the executive offices, and in addition the auditorium, post office, book store, home economics, kitchen and serving rooms, and recitation rooms. The manual arts building contains the school's well-equipped wood and metal shops, tool and stock room, forge shop, foundry, drafting room, gymnasium, and other rooms and equipment. This building is exceptionally well adapted for advanced industrial work, as well as for the type of manual training required in the public schools. The central heating plant is well equipped with high-pressure boilers, which are ample for all purposes. This school has no practice school equipment on the premises, as all practice teaching is done in the Aberdeen public schools.

Additional equipment needed.—This school has unquestionably received more liberal appropriations than any other normal school in the State, although it has not had any too much. A liberal treatment of all the normal schools is the best policy for the legislature to follow. These schools must be assisted in every way to expand and attract more students. The Northern Normal and Industrial School should have certain definite equipment for future enlargement. This includes:

(1) A new auditorium and gymnasium.

(2) Remodeling the old dormitory for women.

(3) A rural practice school.

(4) Increased library facilities, equipment, and books.

Plans should be made for one substantial building to be used as auditorium and gymnasium. The present assembly hall should be converted into library quarters, and the present library transferred from the central building where the present quarters are needed for classrooms. The gymnasium is too small and poorly located for present needs. The space now occupied by the gymnasium could be used to good advantage by the industrial classes. For the new building $200,000 would be needed.

The woman's building could be remodeled and modernized at an outlay of about $10,000.

The most urgent need of the school is, however, rural practice school facilities. Since the biggest present task of the normal schools is to supply many well-prepared rural teachers, each of the four schools should be provided with good practice school plants of the consolidated type. Aberdeen should acquire the triangular tract of 15 acres adjacent to the athletic field. Here should be erected a model two-room school, with full basement, and a model teachers' cottage, both structures complying with the suggestions for ideal school plants discussed elsewhere in the report. It would be highly desirable for the school to enter into a cooperative agreement with the Aberdeen township board to consolidate its three one-room schools at the proposed model school.

(B) THE STATE NORMAL SCHOOL AT MADISON.

Physical equipment.—The school is hampered for lack of ample financial support and up-to-date equipment. The school boasts an excellent training-school building, a good gymnasium, and an adequate heating plant. The rest of the plant and equipment is wholly inadequate. Aside from the buildings mentioned above, the school utilizes the so-called east wing and west wing for recitation rooms, laboratories, library, auditorium, and administration purposes. Another building is used as dormitory for young women.

The library collection is small (4,000 volumes) and poorly housed. A definite annual appropriation of not less than $750 is necessary to get the collection brought up to date. This school has no equipment for manual training and shopwork, if one leaves out of consideration one poorly equipped cellar room not worth mentioning. The auditorium is small and difficult of access. The exit is badly planned and dangerous.

Additional equipment and teaching staff needed at Madison.—(1) The plan of the school authorities has been from the first to connect the east and west wings by a central main building. This is an excellent idea for a State like South Dakota, with its severe winter weather. The committee recommends that a large central building be erected at a cost of about $200,000, between the present wings and connected to them by fireproof protected passageways. The new building should be fireproof throughout, and should be planned to house the administration offices, the library, a number of recitation rooms, and the auditorium. This readjustment would allow ample space for industrial work in one of the present wings.

(2) This school should devote all its energies to preparing elementary-school teachers, including rural teachers, since it lies in the heart of a great agricultural section. To this end the normal school must establish a practical rural practice school. A school plant is recommended, identical with that recommended for Aberdeen. The normal-school campus contains 20 acres. It is urged that 20 acres lying near by (which the committee understands can be procured now at a reasonable price) be purchased and used for rural school plant and agricultural experimentation.

(3) The following staff members should be added without further delay: An expert to organize the rural school department, a manual-training director, one assistant in home economics, one instructor in public-school music, one critic teacher, and one additional janitor.

(c) THE STATE NORMAL SCHOOL AT SPEARFISH.

Physical equipment.—The school plant is composed of four large buildings and a central heating plant set in 80 acres of land used for grounds and school farm. This school is fortunate in having its own school farm of 70 acres. This is sure to play an important part in the future rural teacher training at the school. The main building is large and well equipped. The laboratories and classroom equipment are very satisfactory. The library is the most complete (19,000 volumes) in any of the normal schools. The Wenona Cook Hall, or Young Women's Hall, while on the whole well planned, should be supplied with fire escapes without delay. The training-school building is a satisfactory structure.

The gymnasium and auditorium (under construction) as planned is a splendid structure; but, unfortunately, the present appropriation is insufficient to complete it. The exterior aspect of the building, at least, will be unattractive until the whole is completed according to the original plans.

Needed improvements.—The following improvements are recommended by the committee as essential:

(1) An additional appropriation of $60,000 to complete the gymnasium building according to original plans and specifications.

(2) A rural practice school of the consolidated type, to be erected at a cost of $7,500, and a home for its teachers to cost $3,500.

(3) An appropriation of $10,000 to complete platting and planting the school grounds, which have received little attention in the past.

(4) An appropriation sufficient to install new steam boiler to adequately heat the school buildings.

(D) THE STATE NORMAL SCHOOL AT SPRINGFIELD.

Physical equipment.—The grounds of this normal school comprise 20 acres of land on an elevation overlooking the town and the Missouri Valley. The school has just procured, through purchase, an additional tract of land suitable for rural practice grounds.

The present plant includes a substantial main building (the central section and one wing only completed), a young women's dormitory, a new building used for science classrooms and gymnasium, and a central heating plant.

Needed additions and improvements.—The committee recommends the following additions and improvements for the school at Springfield:

(1) Erection of wing to complete the main building.

(2) Construction of a second building to be used as dormitory and dining hall.

(3) Construction of a complete rural practice school.

The regents should dedicate this normal school to the special function of preparing rural teachers. This calls for much land for experimentation and good laboratory equipment. It requires also good school "home" for the teachers in charge.

The main building can be completed at an outlay of $50,000; $10,000 additional required for remodeling the rest of the building. At the present time the school is obliged to house its home economics department and art department in the subbasement of the old building. This is bad.

The dormitory is overcrowded, 91 girls residing in a building planned for 80. Such a new building can probably be erected for $50,000.

Finally, $7,500 should be appropriated for a two-room consolidated rural practice school and $3,500 for a teachers' cottage and community house, both of which should be erected on the 18 acres of land described above.

SUMMARY OF RECOMMENDATIONS RELATING TO THE STATE NORMAL SCHOOLS.

1. The enlargement of the facilities for preparing teachers in the normal schools. That to this end—

(*a*) The normal school at Springfield devote its energies chiefly to preparing rural teachers.

(*b*) The normal schools at Madison and Spearfish devote their energies chiefly to preparing rural and other elementary teachers and special-subject supervisors.

(c) The Northern Normal and Industrial School at Aberdeen devote its energies to preparing rural and other elementary teachers and supervisors, including supervisors of industrial subjects.

2. The gradual increase of entrance requirements to graduation from an accredited four-year high school.

3. The granting of no normal-school certificates after the spring session of 1924 for less than the completion of two years of normal-school work above high-school graduation.

4. The award after the spring session of 1925 of a two-year course normal-school diploma for the completion of the two-year course above high-school graduation, and of the advanced normal-school diploma for completion of three years above high-school graduation.

5. The provision by the normal schools for differentiated courses of study of two and three years above high-school graduation.

6. The establishment of special summer and irregular courses to enable teachers in service to fulfill the new academic and professional requirements.

7. The division of the State into extension-service districts, one for each normal school, within which each normal school shall organize an extension service for the teachers of the State.

8. The preparation of courses of study for the further training of teachers in service, the satisfactory completion of which shall be necessary to secure a permanent license to teach.

9. The organization of specialized rural school departments in connection with each of the normal schools.

10. Liberal increase in the salaries of all normal-school instructors.

11. More liberal financial support of all the normal schools, to enable them to reach the largest possible number of future teachers.

The commission believes that the preparation of teachers for elementary schools, whether in rural communities or in towns or cities, should be just as thorough as for high schools, and that the ultimate training should include four years of work beyond the high school. How rapidly this standard shall be approached in South Dakota the commission can not foresee. As to how rapidly the courses of study in the normal schools should be lengthened to four years the commission is not prepared to make a recommendation. The constituency of the student body attending the normal schools and the means available for the support of the normal schools are conditioning factors which the regents of education will bear in mind. The foregoing recommendations do not in any way preclude the possibility of enhancing and extending the work of the normal schools beyond the minimum limits here prescribed.

Chapter XIX.

REPARATION OF PUBLIC SCHOOL TEACHERS—THE UNIVERSITY AND COLLEGES.

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ction 1. THE DEPARTMENT OF EDUCATION IN THE UNIVERSITY OF SOUTH DAKOTA.

Purpose of the department.—The purpose of the department of ducation, as expressed by the university authorities—

> to furnish adequate facilities for the study of the science of education and he art of teaching. It is designed to fit teachers, supervisors, principals, and uperintendents for the schools of the State, though its courses are open to nyone interested in the work of education.

At the time of the survey 161 persons who are teaching in the ublic schools, normal schools, or colleges of the State hold degrees rom the University of South Dakota or have taken courses in the niversity. These teachers may be summarized as follows:

(*a*) Thirty-nine superintendents and principals and fifty-nine eachers who hold degrees or are working for advanced degrees and eaching in high schools, normal schools, or colleges of the State.

(*b*) Twenty-nine superintendents and principals and ten teachers, ho are undergraduates of the university, teaching in the high hools of the State of State certificates.

(*b*) Twenty-nine superintendents and principals and ten teachers, hools of the State on State certificates.

Of the 161 teachers 19 are members of normal school, college, and niversity faculties and 4 have resigned for war duties. This leaves 38 in the public schools, 11 of whom are elementary-school teachers. he net total is 127 superintendents, principals, and high-school achers employed in the State, or about 15 per cent of the actual umber required to supply secondary schools. Furthermore, not all f the 127 teachers have come into the high schools through the epartment of education of the university, although probably most f them have had some courses in education. From this it can be seen at the university has only barely touched the problem of preparing achers for secondary schools.

Number and distribution of students enrolled in education.—Th number of students taking courses in education the first semester o 1917–18 was 141, distributed as follows: South Dakota, 131; Iow 9; Nebraska, 1.

Distribution of South Dakota students in education, by counties.

Beadle	1	Grant	1	Moody	
Bonhomme	4	Gregory	4	Pennington	
Brown	3	Hughes	3	Roberts	
Brule	1	Hutchinson	1	Sanborn	
Charles Mix	8	Jerauld	1	Shannon	
Clark	1	Kingsbury	2	Spink	
Clay	32	Lake	2	Turner	
Codington	6	Lawrence	2	Union	
Davison	2	Lincoln	5	Yankton	
Day	1	McCook	6		
Douglas	4	Marshall	1	Total	13
Edmunds	1	Meade	2		
Faulk	5	Minnehaha	9		

The courses offered by the department of education the first seme ter of 1917–18 and the number of students enrolled in each were follows:

	Student
Course 1. Fundamental conceptions of education	
Course 3. Principles of education	
Course 7. Measuring results of teaching	
Course 9. Theory and practice of teaching in elementary schools	
Course 11. Theory and practice of teaching in secondary schools	
Course 17. School administration and supervision	
Course 25. Teaching processes	
Course 27. Interest, motivation, and appreciation	

Of these courses all but 17, 25, and 27 are elementary or introdu tory. The eight courses were given by a staff of two professors an two assistants, who, in addition, devote much time to extensio teaching.

Future policy.—The committee is convinced that the time is op portune to reorganize the present department of education as a scho of education in charge of a capable dean and an ample staff of pr fessors and assistants. The school of education should occupy building of its own, well furnished with laboratory equipment an other facilities required in a modern school of education. In thi should be housed also the university practice school of high-scho rank. It is essential that the students pursuing educational course have access to such a well-organized practice school. Now, all stu dents who have had teaching experience are excused from practic teaching; all others acquire some experience in the Vermillion hig school. The present system, however, does not give the teachers i training such adequate or systematic practice experience as they should have.

With its department of education reorganized as here proposed, the university should be able to overcome the drawbacks of poor geographical location and furnish the State with an annually increasing number of administrators, supervisors, and high-school teachers.

Section 2. DEPARTMENT OF EDUCATION IN THE STATE COLLEGE.

Present status.—The department of education in the State college is of recent origin, and is still in the process of organization. The department is organized for the purpose of preparing principals and superintendents for the agricultural and industrial high schools, and teachers of agriculture, home economics, and manual training.

As can best be seen from the list of graduates for 1917 (p. 225) who elected courses in education, the department does not yet occupy the place it should have in supplying teachers of vocational subjects, and administrators and supervisors for the new kind of rural schools proposed in this survey, the organization of which is likely to be hastened by the standards set up under the Smith-Hughes Act.

Policy of expansion.—It is definitely settled that the State college will prepare all the teachers for the secondary schools taking advantage of the agricultural-education provision in the Smith-Hughes Act, and at least some of the teachers in home economics. If the recommendations of the survey committee are adopted, the State college will probably prepare all the latter class teachers.

The atmosphere of the agricultural college and its large equipment make this an ideal place in which to prepare not alone the vocational teachers spoken of above, but also principals of the large consolidated and rural high schools and continuation schools urged by the committee.

At the present time a single professor is employed in this department. It should be the policy of the school to enlarge the department. It should be the policy of the school to enlarge the department as rapidly as is consistent with public demands. The committee recommends that the following organization be consummated immediately:

1. That the department be placed in charge of a professor of education and director of the department (who shall conduct the courses in educational theory and practice).

2. That there be appointed to assist him (*a*) one specialist of agricultural education; (*b*) one specialist of home economics education; and (*c*) one specialist of rural education.

Section 3. EDUCATIONAL COURSES IN ACCREDITED COLLEGES AND ACADEMIES.

Legislative provisions.—Under the provisions of sections 13 and 14 of the school laws of South Dakota the State department of public instruction has approved the work of certain denominational schools in the State and has placed these schools on equal terms with the State schools in the matter of receiving State certificates.

Section 13, on life diplomas, provides that—

> a life diploma from the State university or from any approved college having a regular course of study, in which at least four years above an approved high-school course are required, may be accepted in lieu of an examination in the subjects named, if the applicant has in his college course pursued one course of pedagogical studies and pedagogical professional training, comprising at least one-fourth work during at least 18 months.

Under this section the following institutions have been placed on the accredited list: Augustana College, Dakota Wesleyan University, Huron College, Sioux Falls College, Yankton College.

These schools are also accredited under section 14, providing for the issue of State certificates.

Section 14 of the school law provides that—

> a diploma from any State normal school in South Dakota, having a course in which at least two years' work above an approved four-year high-school course is required, may be accepted in lieu of an examination in the subjects named: *Provided further*, That a diploma from any other school having a course of study equivalent in extent and similar in character may be accepted in lieu of an examination in the subjects named.
>
> *Provided further*, That applicants for State certificate, upon normal or other school credentials, must show that the course of study pursued therein contained a course of at least 18 months of pedagogy and professional training, comprising at least one-fourth said time.

Under this section the following institutions have been accredited, in addition to the five enumerated above: Lutheran normal and Wessington Springs junior college.

In addition to the courses for State certificates, these two schools offer courses leading to first and second grade certificates. Notre Dame Academy and Ward Academy likewise offer courses leading to first and second grade certificates.

Annual teacher accessions from the accredited colleges.—Table 97 shows that 47 students in the accredited colleges completed the required pedagogical and professional courses entitling them to life diplomas; 37 others completed the six-year course for the five-year State certificate. In all, 192 students completed one or another of the four-certificate courses. Of these, 144 are teaching the present year.

TABLE 97.—*Graduates in education from accredited denominational colleges and academics, 1917.*

Institutions.	Life diploma.	State certificate.	First-grade certificate.	Second-grade certificate.	Total number teaching in 1917–18.
Augustana College			13	10	17
Dakota Wesleyan University	19	12			22
Huron College	15	6			15
Sioux Falls College	2	4			1
Yankton College	11	11			17
Lutheran Normal School		3	9	26	28
Wessington Springs Junior College		1	11	15	24
Ward Academy			10	14	20
Total	47	37	43	65	144

It is evident from these data that the denominational schools are taking an important part in the preparation of teachers for the schools of the State, which ought to be encouraged in every possible way by the State authorities.

Policy of inspecting and re-accrediting the denominational schools.—It is vitally important that the State authorities which have placed these schools on the accredited lists should also exercise the authority of inspection over them, so far as their facilities for teacher training are concerned. The committee believes that former State superintendents have been too ready to grant the right of accrediting, and that as a result several schools enjoy this important function which are not adequately equipped for the work. It is not the purpose to go into details of all the weaknesses discovered. Attention is, however, called to the following facts:

1. Augustana College is only a junior college and should no longer be accredited for life diploma under the four-year college course.

2. Dakota Wesleyan University, Huron College, and Yankton College rank in a class by themselves, and are the only colleges fitted, by reason of teaching staff, laboratory and library equipment, etc., to grant the life diploma on equal terms with the State schools.

3. The colleges now accredited to offer courses leading to life diplomas and State certificates do not have the equipment (practice school, etc.) to instruct elementary school teachers which most of the six-year course teachers become.

4. The equipment of the schools that limit their courses to the State certificate and the first and second grade certificates, or first and second grade certificates only, is generally too meager. This refers particularly to training-school facilities and professional libraries.

5. The accredited schools that offer courses for certificates similar to the courses given in the normal schools should gradually raise their entrance requirements and lengthen their courses to comply with the standards set for the normal schools (see page 237).

Section 4. PROPOSED TEACHER-TRAINING DEPARTMENTS IN HIGH SCHOOLS.

In a total of 9,250 students enrolled in the South Dakota high schools, only 280 students study teaching subjects. Despite this fact, more than 25 per cent of these students teach without further preparation. This is a bad practice. The high schools have a real opportunity to stimulate a better professional attitude among the young people, with the ultimate result of hastening the raising of standards and building up the attendance at the normal schools.

What schools should offer training courses.—The committee believes that only a limited number of fully accredited high schools should be authorized to offer teacher-training courses. As a beginning the privilege might be limited to the 19 high schools in Group I (see page 187). However, the ultimate aim should be to establish on such school in each organized county. Teaching staffs, courses o study, and equipment of these schools should be approved by th State department of public instruction and should receive State ai for their training departments. The work should be organized as fifth or graduate year, and it should be understood that this is onl a temporary expedient. As soon as possible the normal school should be so enlarged as to enable them to prepare a sufficient numbe of teachers for all elementary schools.

The committee accordingly makes the following specific recommendations:

1. That the State legislature appropriate $40,000 for the biennium 1919-2 to aid in establishing and maintaining teacher-training departments organiz as fifth-year courses in connection with four-year high schools approved by t State department of public instruction.
2. That no school shall receive more than $1,000 per annum.

The following course is planned for fifth-year study in high school organizing teacher-training departments:

FIRST TERM. 12 hours. **Total hou per week**

Practical introductions to teaching

A simple course embodying such principles of education and of teaching as will aid the teacher-in-training to orient himself and get a grasp of the fundamental principles which should precede observation and practice teaching and special methods and rural school management. The course is necessarily elementary; little attempt is made to stress the physical facts underlying the principles of teaching.

English

A course in English language, including grammar, oral and written composition, and spelling. The presupposition is that the students have already acquired a reasonable good English equipment in their high-school course. The present course is intended to intensify the work done in high school, and particularly to emphasize the special phases of English that should be taught in elementary rural schools—how best to teach composition; how much, when, and where to teach grammar; and how to teach and how much to include of spelling.

Total hours
per week.

Nature study-agriculture ---------- 4

A course intended as an approach to the central subject in every rural curriculum, i. e., agriculture, from the educational and spiritual, rather than the occupational, point of view. The first term is devoted largely to the general environment in which rural children live, and to a study of plants, birds, insects, etc., with practical methods of presentation, for the purpose of placing children in harmony with the nature environment where they live, to the end that they may learn to love and honor the land.

Rural health and sanitation ---------- 2

A comprehensive course, including personal hygiene, school sanitation, and home and community sanitation. It emphasizes the teacher's own health and the influence of the pupil's health on study and school progress. Much time is devoted to the principles of school sanitation, including ventilation, heating, lighting, communicable diseases, etc. About one-fourth of the time is given to farm-home sanitation and sanitary living, with emphasis on water supply, sewage disposal, air, food, and clothing.

Observation and practice teaching ---------- 4

Local elementary and near-by rural schools to be used as laboratory, as prerequisites for best results in this course. Fully two-thirds of the time of this term is devoted to observation of class procedure and management, technique, and drill lessons. Some time is devoted to a study of general rural school conditions. No actual practice teaching is done during this term unless the class is too large to permit all required teaching to be completed by the students during the second and third terms.

Physical education ---------- 2

A course devoted to the significance of physical training, corrective exercises, etc.

20

SECOND TERM. 12 weeks.

Rural school management and methods of teaching ---------- 4

A course devoted to the problems of rural school organization, classroom procedure, daily program, and class technique. The study accompanies practice teaching, which begins the second term, from which it derives its meaning, as the discussions in class usuallly grow out of the daily experiences gained in observation and practice teaching.

Arithmetic and farm accounts ---------- 3

A careful study of the fundamental principles of arithmetic, and special emphasis on application of these principles to the content matter available in every rural environment. Considerable time is devoted to simple farm accounts.

Reading and phonics ---------- 3

A course designed to give the student a comprehensive view of the aims and purposes of teaching reading. Much time is given to *how* to teach the subject, what the different groups should read, and how to correlate reading to other subjects in the program.

School music ---------- 2

This course is intended to prepare teachers to give music as a regular class exercise in the rural schools. Much time is devoted to sight reading and part singing. The aim is largely to develop the power to read the printed score and appreciate choice music.

Art ---------- 2

Includes such phases of art as can be profitably undertaken in rural schools. It aims to develop appreciation of good pictures, understanding and love of the beautiful in nature, and outlines ways for improving and beautifying the farm home.

Total hours per week.

Industrial arts 2

A course planned to help students prepare for such phases of industrial arts as should properly cover the first five years of the rural school course. The subject matter is planned to center about the activities of home and community, these activities are imitated in projects made by paper, cardboard, clay, and other materials which are easily manipulated.

Observation and practice teaching 4

This course is devoted to class teaching in the rural or other elementary practice schools. The work centers about language, reading, spelling, and arithmetic. Conferences with critic teachers of the practice schools.

20

THIRD TERM. 12 weeks.

Rural-life problems 4

A thorough-going course in the fundamental characteristics of rural life; a history of its changes from pioneering to modern agriculture; a statement of its primary institutions and agencies, with special emphasis on the home, church, and school; place of the rural school in community leadership; modern school organization, administration, and supervision; farm community schools, continuation schools, extension courses, etc.

History and community civics 4

A course designed especially to teach the methods of these subjects. It supplements what has already been learned, and gives especially the phases of history and community civics which should be emphasized in rural schools. The course in civics stresses rural health and morals, responsibility in keeping rural communities wholesome and healthful; in protecting them from social vice, etc.

Nature study—agriculture 4

The course continues the work begun with the fall term. It emphasizes agriculture teaching in the laboratory of nature. The textbook is considered in the light of leading thread only. All students are expected to work in the school experiment plats, and should grow individual gardens. School and home gardens, school and home projects, and club work receive much attention.

Home economics (girls) 2

A course which emphasizes sewing, cooking as approached through the medium of the hot lunch, and similar phases of home economics which are practicable in the small rural school.

Manual training (boys) 2

This is a study of such manual activities as every farm boy should be acquainted with. It discourages the old limitation of keeping the boy at work at a few highly finished or elaborated articles, and emphasizes instead all the commonly practiced manual activities essential to successful agricultural life, which include work in wood, leather, metal, and cement.

Observation and practice teaching 4

The course for this term continues the practice teaching by classes and subjects begun with the second term. Geography, history, music, art, and industrial work receive considerable attention. The last half of the term is devoted to room teaching; i. e., the practice teacher takes entire charge of the room. Conferences with critic teachers continued.

20

Physical education 2

Devoted chiefly to supervised play and games. No preparation required.

This course may be organized for three terms with 60 term-hour credits or for two semesters with 40 semester-hour credits.

SUMMARY OF RECOMMENDATIONS ON TEACHER-PREPARATION IN THE UNIVERSITY AND COLLEGES AND SPECIAL HIGH SCHOOLS.

1. The reorganization of the department of education in the University of South Dakota as a school of education in charge of a dean and faculty of education.

2. The organization of a practice high school in connection with the university department of education.

3. The enlargement of the department of education in the State College of Agriculture to meet the new demands made on it under the Smith-Hughes Act.

4. The systematic inspection of the accredited denominational colleges and academies by the State department of public instruction.

5. The readjustment of certification privileges of the denominational schools on the following basis:

a. That Huron College, the Dakota Wesleyan University, and Yankton College alone retain the acquired right to offer life diplomas for the completion of the four-year college course; that these schools abandon the six-year courses by reason of lack of adequate practice school facilities.

b. That all the other colleges and academies offering courses leading to State certificates and to first and second grade certificates improve their practice-school facilities and enlarge their professional libraries under the direction of the State department of public instruction in order to retain the certification privilege they now hold.

6. The establishment of training departments for elementary teachers in certain accredited high schools.

Chapter XX.

HIGHER EDUCATION.[1]

South Dakota is one of the comparatively few States of the Union that divide support for higher education among three or more institutions. Twenty-five of the States provide whatever higher education is afforded in one institution, with centralized administration and under a single board of control. Ten States maintain two separate institutions, and 13 States maintain three or four higher institutions in different localities, with separate administration and for the most part under separate boards of control. Only five States besides South Dakota (Colorado, Michigan, Montana, New Mexico, and Oklahoma) maintain separate schools of mines.

Experience and theory apparently justify two principles for the organization of higher education: (*a*) That, whenever possible, all higher education, other than that of the normal schools, should be consolidated in a single State university; (*b*) that, whenever two or more higher institutions are established definite fields should be assigned to the different institutions, and great care should be taken to so coordinate the work of the institutions as to prevent wasteful duplication of courses or departments.

Section 1. THE CONSOLIDATION OF HIGHER EDUCATION IN SOUTH DAKOTA.

In the judgment of the survey committee a serious error was made when the State of South Dakota established the present three institutions for higher education. The committee believes that the educational and material interests of the State would be served best if a single institution were maintained, that institution comprehending all forms of higher education now provided in the State university, the State college, and the State school of mines. Beyond question this would have been the best policy in the beginning, and the committee is convinced that even now it would be far better to consolidate all three of its degree-granting institutions, abandon the present plants, and establish a new State university centrally located and accessible from all parts of the State. The survey committee accordingly recommends the establishment of a consolidated University of South Dakota. It makes this recommendation for the following reasons:

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[1] The present statement on higher education is condensed from the report of the survey committee, which was too lengthy and detailed to be included herewith. The full report will probably be printed later as a bulletin of the Bureau of Education.

(1) The total number of collegiate students in the State of South Dakota is relatively small—so small that its division into three groups in the three institutions renders impossible effective and, at the same time, reasonably economical instruction. At the present time the total number of collegiate students resident in the State of South Dakota is much below 2,000, while the number attending public institutions in the State is less than 1,000. A single university could well provide for five or six times this number if the population should increase accordingly.

(2) The expense of maintaining a single consolidated university would be far less than the expense of maintaining the three existing institutions. In less than a decade the State could probably recover all the loss incident to the abandonment of existing plants, even if no other use were found for them.

(3) One of the greatest disadvantages of maintaining two or more institutions for higher education is the apparently inevitable rise of interinstitutional competition with its consequent duplication of work, wasteful expenditure of public money, sectional politics, and constant interference with the proper development of educational facilities. The State of South Dakota has been more fortunate than most States in escaping the sectional discord, political logrolling, educational discouragement, and interinstitutional difficulties which have appeared to be inextricably related to the maintenance of more than one higher institution in other States. It has not, however, entirely escaped interinstitutional competition, a certain amount of institutional politics, and a considerable amount of educational duplication with its consequent educational loss and financial waste. South Dakota has already paid a heavy bill for its educational duplication and has already failed to develop that degree of educational achievement which the committee believes would follow from the consolidation of its higher institutions. As time goes on the financial loss will be heavier and the educational loss will be irretrievable.

In any circumstance the committee recommends the abandonment of the State school of mines. It recommends also that the State seize on the favorable opportunity to reorganize its entire system of collegiate education by the establishment of a consolidated State university.

The establishment of junior colleges.—One of the strongest arguments for the maintenance of more than one higher institution is the fact that interest in higher education and attendance at higher institutions are greatly affected by the proximity and accessibility of such institutions. In making the above recommendation for a consolidated State university the survey committee had in mind a further recommendation designed to meet the desirability of institutions located so as to develop a State-wide interest in higher education and to foster attendance at higher institutions. Within the past decade several States have encouraged the establishment of institutions which cover the work of the freshman and sophomore years of a collegiate course. To such institutions has been given the name of junior colleges. In most colleges and universities the major part of the work of the freshman and sophomore years is limited to elementary courses and courses which are foundational for the somewhat more specialized work of the junior and senior years. This work is comparatively inexpensive and the relatively large numbers of students enrolled in the courses does not cause wasteful duplication. It may well be provided in several institutions without educational or financial loss. On the other hand, the major part of the work of the junior and senior years in a college or university is somewhat specialized and therefore expensive unless consolidated in one institution.

The committee recommends for the serious consideration of the educational authorities of the State of South Dakota the establishment of three junior colleges affiliated with the consolidated State university and providing each a two-years' course of study coordinated with the junior year of the university. For one of these junior colleges provision might well be made in the western part of the State to take the place of much of the work now done by the general course at the State school of mines and possibly occupying the plant to be vacated by that institution. The location of the other two (or more) institutions would have to be determined with reference to the location of the State university. If that institution be located in the central part of the State, one of the junior colleges might well be located in the southeastern part of the State, possibly occupying the plant of the present State university, and one in the northeastern part of the State. Under no conditions should any of these junior colleges be affiliated with any of the State normal schools. They should be directly affiliated with the university and be considered as integral parts of that institution, their administration being subordinate to that of the State university.

Section 2. ENROLLMENT AT THE STATE HIGHER INSTITUTIONS.

The best measure of the size of any college or university is the number of collegiate undergraduates and the number of graduate students. Students listed in other categories must be considered as benefiting by incidental (and in some cases detrimental) functions performed by the institution. At the State college the regular collegiate students enrolled are outnumbered by the other students in attendance. A truly college atmosphere can not be properly maintained where the subcollegiate, special, and irregular students outnumber the collegiate students. In a different way, and to a less extent, the university suffers from the presence of a relatively large number of "special students." At the State school of mines the number of secondary-school students is almost equal to the number of collegiate students.

TABLE 98.—*Enrollments at the three degree-granting institutions of South Dakota in 1916–17.*

Institutions.	Collegiate undergraduates.	Graduate students.	Special and irregular students.	Summer-school students.	Secondary-school pupils.	Totals, excluding duplicates.
State university	481	39	108	81	....	709
State college	367	5	[1] 67	155	[2] 346	895
State school of mines	48	....	27	....	43	118
Total	896	44	[1] 202	236	[2] 389	1,722

[1] Including 57 "short course" students at the State college.
[2] Including 266 pupils in the State college (secondary) school of agriculture.

The educational influences of the three collegiate institutions at present tend to be more localized than should be the case. This is shown by the geographical distribution of students in the various institutions. For the three institutions those figures may be summarized in the following table:

TABLE 99.—*Geographical distribution of collegiate students in the State university, the State college, and the State school of mines, in 1916–17.*

Distribution according to divisions of the State.

Full standing collegiate students only.	Southeastern division.	Northeastern division.	Western division.	Resident in the State.	Resident elsewhere.	Grand total.
Undergraduates and graduates only:						
State university	303	107	53	463	57	520
State college	85	219	15	349	23	372
State school of mines	2	3	40	45	3	48
Total	390	359	108	857	83	940
Percentages in different divisions of the State:						
State university	58.3	20.5	10.2	89.0	11.0	100.0
State college	22.8	66.9	4.0	93.8	6.2	100.0
State school of mines	4.2	6.3	83.3	93.8	6.2	100.0
Total	41.5	38.2	11.5	91.2	8.8	100.0
Percentages in each of the institutions of the State:						
State university	77.7	29.8	49.1	54.0	68.7	55.3
State college	21.8	69.4	13.9	40.7	27.7	39.6
State school of mines	0.5	0.8	37.0	5.3	3.6	5.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

From these figures several facts may be understood:

1. Of all collegiate students in these institutions more than nine tenths are residents of the State. In other words, the faciliti provided for higher education in South Dakota primarily benefi State residents. The proportion of nonresidents is not excessive an does not interfere with the legitimate interests of the State. Such small proportion of nonresidents benefits rather than hampers th work of the three institutions.

2. Of the total population of the State approximately 40 per cen is found in the southeastern division and about 40 per cent in th northeastern division. Collegiate enrollments from those division are in proportion about the same. Enrollments from the wester division of the State are somewhat below the proportion of population in that division.

3. Of the total collegiate enrollments from the southeastern division more than three-quarters are at the State university. Of th total collegiate enrollments from the northeastern division more tha two-thirds are at the State college. Of the total collegiate enrollments from the western division nearly one-half are at the Stat university, slightly more than one-eighth at the State college, an somewhat over one-third at the State school of mines. Of the tota collegiate enrollments for the State 55 per cent are at the universit nearly 40 per cent at the State college, and about 5 per cent at th State school of mines.

4. Of collegiate students at the State university nearly three-fifth are residents of the southeastern division of the State, about one-fifth from the northeastern division, about one-tenth from the western division, and about one-tenth from other States. Of collegia students at the State college about two-thirds are residents of t northeastern division, about one-fifth to one-quarter from the southeastern division, 4 per cent from the western division, and 6 per ce from outside the State. Of collegiate students at the State scho of mines more than four-fifths are from the western division of t State.

These facts emphasize the importance of consolidating the collegiate education of South Dakota into a single State university, whic shall include all departments of higher education now provided i the three separate institutions and all departments of higher education hereafter to be established.

Section 3. COURSES OFFERED AT THE HIGHER INSTITUTIONS.

At the present time provision is made in one or more of the degree-granting institutions of South Dakota for those types of higher education which appear to be justified and to the extent which the nee of the State appear to demand. Each of the three institutions, an ularly the State university and the State college, provides of instruction which may be considered fundamental to higher tion and which must form service departments to most kinds cialized professional work, such as the sciences, social studies, sh, languages, mathematics, etc. In addition special forms of r education are provided in one or more of the three institutions. the following table are presented figures showing the number irses in each department actually given and enrolling students h institution in 1916–17, together with the gross enrollments:

TABLE 100.—*Enrollment in courses and institutions.*

epartments.	Courses given in 1916–17.				Gross enrollments in 1916–17.[1]			
	University.	College.	Mines.	Total.	University.	College.	Mines.	Total.
	27	12	2	41	445	452	47	944
tics	13	11	5	29	143	154	37	334
anguages	51	12	(2)	63	536	259	0	795
nd political science	15	7	(2)	22	282	130	0	412
cs and sociology	13	4	2	19	322	83	16	421
n	10	11	0	21	341	213	0	554
onomics	14	12	0	26	213	295	0	508
m	3	1	0	4	19	11	0	30
	8	10	0	18	74	103	0	177
	8	5	0	13	125	123	0	248
	4	6	0	10	31	172	0	203
y	26	11	5	42	305	404	31	740
	5	6	4	15	76	132	14	222
l engineering	2	10	6	18	14	32	19	65
ineering	10	12	17	39	30	84	98	258
al engineering	28	22	1	51	144	212	2	396
eaking	6	8	0	14	122	174	0	229
mineralogy	7	0	5	12	72	0	57	174
	9	0	0	9	74	0	0	21
	5	0	0	5	27	0	0	27
	2	0	0	2	14	0	0	14
	24	0	0	24	208	0	0	208
	38	0	0	38	1,000	0	0	1,000
logy and hygiene	3	0	0	3	20	0	0	20
ogy, etc	0	4	0	4	0	63	0	63
ng	7	(3)	0	7	152	(3)	0	152
y	0	10	0	10	0	132	0	132
ry medicine	0	4	0	4	0	84	0	84
y	0	10	0	10	0	130	0	130
usbandry	0	9	0	9	0	123	0	123
sbandry	0	8	0	8	0	95	0	95
ture. forestry	0	3	0	3	0	60	0	60
gy	0	0	10	10	0	0	18	18
	0	0	9	9	0	0	40	40
tals	338	208	66	612	4,789	3,720	379	8,888

ross enrollments are determined by adding together all names in every course. The number of individuals enrolled is sometimes much smaller, since the gross enrollment counts each name as nes as it may appear in different classes within any one department or in different departments. In es this table would falsely appear to indicate that in some courses no instruction is given in an n where the subject appears under another name or within a different department.
n by preparatory students only in 1916–17.
he most part of subcollegiate grade at the State college.

se figures, in some cases, suggest the possibility that the offerf the State institutions may have expanded somewhat beyond legitimate bounds. Thus it may be questioned seriously whether urses having a gross enrollment of 635 students (about six stu- per course) can be justified by the engineering needs of the or the engineering interests of students. This question becomes e more serious when it is realized that more than 50 other courses in engineering were offered in 1916–17, but no students were enrolled in them.

In the following table are presented figures showing the extent to which courses were offered but not given in 1916–17, together with some figures for the gross enrollment in each institution.

TABLE 101.—*Courses and enrollments.*

Institutions.	Courses, 1916–1917.			Enrollments (gross).		
	Offered.	Given.	Not given.	Totals (gross).	Average per— Course offered.	Average per— Course given.
University	479	338	141	4,789	10.0	14.2
College	296	208	88	3,720	12.5	17.8
School of mines	121	66	55	379	3.1	5.7
Total	896	612	284	8,888	9.9	14.5

It appears that of all courses offered, according to the catalogues for 1916–17 in the three institutions taken collectively, nearly one-third were not actually given. It is, of course, obvious that the offerings of the State institutions must be sufficiently extensive to meet reasonable demands on the part of students in attendance and on the part of prospective students. Nevertheless, it is fair neither to students nor to instructors to offer a program of instruction which the institutions could not actually provide without placing a burden on the staff which it could ill support. Certainly until there is much greater demand than can now be found it is unreasonable to include courses in the catalogue which are seldom if ever actually given. Over-ambitious offerings in the catalogues contribute neither to the dignity nor to the efficiency of any institution.

Section 4. THE PROBLEM OF DUPLICATION.

Whenever two or more institutions are maintained in any State a certain amount of duplication of courses, departments, laboratories, libraries, equipment, and instruction is inevitable. Studies such as English, history, economics, mathematics, chemistry, physics, and the like, must be found in every institution which pretends to provide instruction of collegiate or university grade. Every institution must have its own library, its own laboratories, its own gymnasium, its own equipment, regardless of the provision for similar facilities in other institutions. Not all duplication, therefore, can be avoided under these conditions. Courses such as those mentioned above are administered almost as economically in two institutions as in one, provided the number of students enrolled in each of the institutions is large enough to afford economical enrollments in classes.

Duplication is justifiable in the case of studies which form the basis of any collegiate course and where duplicate courses in two institutions may be carried on as effectively and as economically as in one institution. It is not justified when there is costly specialized work in any department and when relatively small enrollments in each institution render the cost of instruction disproportionately large. This is almost invariably the case in connection with professional courses such as agriculture, engineering, law, medicine, pharmacy, and all graduate work.

Major and service lines of instruction.—Unfortunately, in most States maintaining two or more institutions for higher education the lines of differentiation have been but loosely defined. Even where the provisions determining the functions of institutions are definite and clear they show what one institution shall do rather than indicate what each institution shall not do. The result is that in most States any institution may provide almost any kind of instruction for which it can secure funds and for the support of which it can develop sufficiently strong political pressure. The difficulty arises particularly in connection with fields of instruction where needless and wasteful duplication is the result of failure to differentiate clearly the special functions of the different institutions. The successful operation of higher education in States maintaining two or more institutions is fundamentally dependent on the determination and maintenance of legitimate lines of differentiation.

The first step in securing this differentiation is the specification by the legislature or by the controlling board of special functions to be performed by each of the State institutions, particularly along lines of professional education. The second step is the rigid adherence to the provision that no other institution in the State should be permitted to encroach on the special field allotted to any one institution to such an extent as to make it a principal line of work leading to advanced instruction of a specialized character. To prevent such duplication of specialized instruction there is need for a distinction between fields which are the peculiar prerogative of one institution and those which may be offered in any other institution. The Bureau of Education has attempted to do this by distinguishing between major and service lines of instruction. Major lines are those which represent the principal fields of instruction assigned to any institution for development along advanced lines leading toward professional or other specialization on the part of the given institution, e. g., law, medicine, agriculture, engineering, pharmacy. An institution to which has been assigned special fields should be permitted to develop such fields as far as the interests of the State may allow, and no other institution in the State should be permitted to provide instruction in such fields as a major line. Service lines are those which, while not representing specialized fields for instruction in one institution, are necessary for the properly rounded-out education of a student who may be specializing in a line quite different. Thus in one institution only should it be permitted to develop the study of history as a field of specialized concentration, i. e., as a major line. In every institution, however, some study should be provided as a subject contributing to the efficiency of an engineer, of a pharmacist, of a lawyer, or of a physician. Thus it comes about that what may be a major line in one institution may be a service line in another institution.

The value of making this distinction between major and service lines of instruction lies in the fact that thereby a criterion is secured for determining the extent to which certain fields of instruction may legitimately be developed in different institutions without leading to unjustifiable duplication. Home economics offers a good example. One institution only in any State should be permitted to offer home economics as a major line. Nevertheless, every institution in the State in which women are educated should afford some instruction in this field. Only that institution to which the specialized training of dieticians, teachers of home economics, etc., is allotted should be permitted to offer specialized and advanced instruction in this field as a major line. All institutions ought to offer instruction in home economics as a service line, leading to no professional preparation or degree. The importance of this distinction will appear more clearly in the following discussion of duplication in South Dakota:

DUPLICATION IN SOUTH DAKOTA.

By section 208 of the Revised Political Code the regents of education are given "full power to authorize for the institutions under their control such departments and courses of study as they may think best." Accordingly, no higher institution in the State can establish any course of study or department without the consent and specific approval of the regents, and the latter must be held responsible for the establishment of every course or department. Moreover by section 211 of that code, the regents are directed "to administer the schools in such a manner as to enable each one of them to do in the best manner its own specific work, but all with a view to the strictest economy and so as to unify and harmonize the entire work of all the schools under their control." By the provisions of the same section of the code the regents "are expressly forbidden to continue or to create chairs, departments, laboratories, libraries, or other equipment in multiplication, except where the obvious needs of the special work of the schools make such multiplication necessary."

In the judgment of the survey committee the regents of education have violated the definite mandate of the law with respect to duplication in the fields of engineering and home economics. They have permitted questionable practices in the field of music and have allowed courses which more or less overlap in the normal schools, in the State university, and in the State college.

(1) *Duplication in engineering instruction.*—At the present time engineering departments are maintained in each of the three collegiate institutions maintained by the State and placed under the control of the regents of education, although the needs of the State and of the students could be met far more effectively and economically if such courses were limited to one institution. This appears from the figures presented in the following table:

TABLE 102.—*Figures illustrating engineering courses in 1916–17.*

	State university.	State college.	State school of mines.[1]	Total.
Courses offered, 1916–17	53	73	38	164
Courses offered but not given, 1916–17	13	29	15	57
Courses actually given, 1916–17	40	44	23	107
Classes enrolling 1–5 students each, 1916–17	25	26	15	66
Classes enrolling 6–10 students each, 1916–17	9	10	6	25
Classes enrolling more than 10 students each	6	8	2	16
Gross enrollments, 1916–17	188	328	117	633
Average enrollment per class actually given	4.7	7.5	5.1	5.9
Gross student clock-hours for the year	1,373	1,653	631	3,657
Total full-time instructors	3.25	6.00	[2] 2.00	11.25
Student clock-hours per instructor (semester)	211	138	[2] 158	163
Gross teaching hours for the year	107.0	121.0	64.5	292.5
Teaching hours per instructor (semester)	16.5	10.1	16.1	13.0
Engineering degrees, 1913 to 1917	23	32	([3])	55
Engineering degrees, 1917	3	6	([3])	9
Alumni (1912 to 1916) engaged as engineers	16	31	3	50
Alumni (total) engaged as engineers	31	81	11	126
Salaries for engineering instruction, 1916–17	$6,410	$10,400	$2,888	$19,698

[1] "Physics and Electrical Engineering" are combined in one department at the school of mines. In this table figures for electrical engineering only have been considered.

[2] A part of the time of one instructor is devoted to physics.

[3] The State school of mines is permitted to give special courses, but not to grant degrees in engineering except mining and metallurgy, which courses are not considered in this table.

From these figures several important facts may be deduced:

(a) Small enrollments in engineering courses in each institution render the cost of instruction extremely expensive.

(b) Nearly two-thirds of all courses actually given in 1916–17 enrolled from one to five students.

(c) The average size of classes actually given in 1916–17 was six students.

(*d*) All the work in engineering now provided in three institutions could be provided at far less expense and far more effectively in a single institution.

The present duplication of courses in engineering can not be justified on the ground that the "obvious needs of the special work of the schools make such multiplication necessary," nor is it carried on "with a view to the strictest economy and so as to unify and harmonize the entire work of all the schools" under the control of the regents of education. The survey committee recommends the maintenance of engineering courses at one institution only.

(3) *Duplication in music instruction.*—It must be recognized that music instruction may form a part of the education of any student, whatever may be his field of specialized or professional training. For this reason courses in music have their place in any or all of the higher institutions of South Dakota. One institution only, however, should be permitted to develop courses in music as a major line leading toward specialization in that field, toward a special diploma, and in preparation for professional work in that field. At the present time two institutions in South Dakota maintain flourishing departments of music, and in each case the department is providing advanced and specialized work, i. e., both the State university and the State college provide music instruction as a major line.

The State university maintains a college of music, providing music instruction ranging all the way from the beginning stages (even for high-school pupils) to advanced graduate work for the training of professional musicians. It also provides courses for students who take no other work than that in music—"music preparatory and specials." It provides training leading toward a special degree, "Bachelor of Music." In other words, music at the State university is clearly a major line of instruction.

The State college provides a department of music, which offers three "courses": (1) Preparatory, (2) academic, and (3) collegiate. From the catalogue announcements and from the fact that there were 107 students taking music only at the college, it is clear that music is regarded not merely as a service line but also as a major line of instruction at the State college.

The survey committee believes that the regents of education should permit one institution only to maintain courses in music as a major line.

(4) *Duplication in commercial education.*—Attention has been called to the four-year curriculum in commerce offered by the university, to the several collegiate courses offered by the State college, and to the subcollegiate courses offered by each of these institutions. At the university the work is happily associated with the department of economics. At the State college the work in economics, from lack of support, has not been well developed, and commerce here is more closely related to the preparatory department. Since there is not likely to be any greatly increased demand for strictly collegiate work in this subject, the establishment of a faculty or division of com-

merce is not warranted, and as a matter of educational policy commercial education should be restricted to a single institution.

(5) *Duplication in home economics.*—Home economics was not definitely organized in the University of South Dakota until the fall of 1914. For a number of years preceding this a course in sanitation and hygiene had been listed which closely approximated that which is usually classified as home sanitation and placed under home economics.

In the university catalogue, issued in May 1913, the title "household arts" appears over a collection of four courses, one given by the instructor of chemistry, one by the professor of physiology, one given by the instructor in art and one by the instructor in finance. This group of courses was the forerunner of the home economics department.

The work was finally established as a result of an urgent demand by the students of the university with a very definite understanding that it should not duplicate the work done at the agricultural college. Unfortunately there has been no clearly defined field for home economics at the university, and consequently there is now a tendency to duplicate the work given at the State college. It is believed that the work should be developed as a major line at but one institution. It is rightfully a major line in land-grant colleges. In most of the middle west agricultural colleges, courses in home-making were established at the time the instruction was organized and have been continuously maintained since that time. This work was inaugurated in the South Dakota Agricultural College in 1887. The college now offers instruction in the four-year college course and in the secondary "school of agriculture."

Home economics instruction should of course be available for every college and university woman. It offers her training for enlarged usefulness and happiness in life; it increases her value as a leader in civic and community affairs; it is indeed a legitimate part of the liberal education of all women.

In the judgment of this committee, therefore, the work in home economics at the university should be continued as a service line only. It should supplement the training in liberal arts and education, but should not rival these in emphasis placed upon it. It should be as worthy of recognition as the home economics department at the State college, but should not duplicate the function of that department in the scheme of public education. It should enrich the training of the women students of the university but should not dominate that training. Being truly a "service" department, it should serve the maximum number of women students, giving to them the type of training most valuable for symmetrical development of mind and character.

In small high schools teachers frequently teach several subjects, one of which may be home economics. Graduates of the university would naturally prepare for teaching one or more academic branches. For this they should receive special teacher training. Their minor subject may be home economics, which they might be required to teach in combination with the academic subjects. For special professional training in the minor subject the maintenance of teacher training courses at the university can not be defended.

A similar situation may not infrequently develop for graduates of the State college. Employed primarily to teach home economics and trained for this, they may be required to teach English or history or even a language. Such combinations are at times necessary, though undesirable, but do not justify the State college in establishing courses in teacher training for English or language courses.

(6) *Duplication of collegiate and normal-school instruction.*—At the present time it appears that the work of the normal schools of the State and of the collegiate institutions of the State overlap in two respects:

(*a*) Collegiate instruction in the normal schools: The normal schools of the State should be so affiliated with the collegiate institutions that persons completing all or any part of the work of the normal schools, and otherwise qualified, should be admitted to the collegiate institution without unnecessary loss of time or standing. Nevertheless, it is also true that the normal schools should not become institutions wherein students should deliberately aim to secure the first years of their college education.

(*b*) Duplication in teacher training: Attention has already been called to the fact that there is more or less overlapping by the various higher institutions of the State in the training of teachers. Until the present time the regents of education have checked the efforts of the normal schools to train secondary-school teachers. They have not, however, prevented the collegiate institutions, particularly the State university, from training elementary school teachers, nor have they clearly differentiated the functions of the State university and the State college with respect to the training of teachers. In the judgment of the survey committee the regents should at once delimit the functions.

Section 5. DETERMINING WHAT SHALL BE MAJOR AND SERVICE LINES OF INSTRUCTION.

If the policy of consolidating the three collegiate institutions now maintained by the State into a single comprehensive State university be adopted, all difficulties of duplication or the assignment of special fields to the various institutions disappear. However, if the State is unwilling to adopt this recommendation, it becomes imperative that definite regulations be made for the determination of major and service lines of instruction in the various institutions. The committee makes the following outlined recommendations:

(1) The State school of mines should be abandoned immediately, and instruction in mining and metallurgy (required by the constitution to be provided in one institution of the State) should be transferred to that other institution to which engineering is assigned. In the judgment of the committee that institution should be the State college.

(2) Agriculture and its allied fields should remain major lines at the State college.

(3) Law should remain a major line at the State university.

(4) Medicine should remain a major line at the State university.

(5) Pharmacy should be transferred as a major line to the State university. The reason for this recommendation is that there is no special connection between pharmacy and any other line of instruction conducted at the State college, and there is a very close relation between pharmacy and medicine, as well as the work of the State health laboratory and the food and drug commission located at the university.

(6) All engineering instruction should be consolidated at the State college and removed from the school of mines and from the university. Reasons for this recommendation are as follows: (*a*) The effective and economical conduct of engineering instruction in South Dakota requires its consolidation in one institution. (*b*) At present the State college enrolls the largest numbers of engineering students, has the largest corps of instructors in engineering, and has received the largest amount of money from the State, that money being invested in more expensive buildings and equipment than at the State university. (*c*) The State college at present provides several short courses and other courses apart from the regular collegiate work which utilize the equipment of the engineering department. (*d*) The removal of engineering courses from the State college would leave that institution with little except agriculture and home economics, thus destroying much of its real usefulness. (*e*) At the State college at present a large proportion of the cost of engineering courses is met by Federal funds. It is within the competence of the State legislature to transfer all or any part of those funds to any other institution if it so desires. However, it is desirable not to split those funds, using part for agriculture and its allied fields in one institution, and a part for engineering in another.

(7) Home economics should be made a major line at the State college and restricted to a service line in the State university.

(8). Music should be made a major line at the State university and reduced to a service line at the State college.

(9) Art should be made a major line at the State university and a service line only at the State college.

(11) On account of its intimate relation with economics, and since its withdrawal would seriously restrict the scope of this department, commerce should be made a major line at the State university and a service line at the State college.

(12) Education and training of teachers should be differentiated as follows: (*a*) The training of elementary school teachers should be the special and peculiar function of the State normal schools. (*b*) The training of secondary school teachers of agriculture, industry, home economics, and allied subjects, together with appropriate supervisors, directors, etc., should be the special and peculiar function of the State college. (*c*) The training of other secondary school teachers, together with the training of principals, superintendents, and the graduate training of school officers, should be the special and peculiar function of the State university.

Section 6. SECONDARY INSTRUCTION AT THE HIGHER INSTITUTIONS.

Preparatory instruction at the higher institutions.—Two of the State-supported higher institutions and each of the independent colleges maintain preparatory schools or "departments." For the year 1916–17, 498 students were enrolled in the preparatory departments of the several colleges of the State. Of this number 422 were from the State and 413 of these were from counties in which a four-year high school is located.

It is noteworthy that the preparatory departments of the South Dakota colleges are generally inferior in facilities for instruction to many of the high schools of the State, and frequently inferior to those in the town where the college is located. This applies to the preparatory departments of the independent colleges as well as to those of the State-supported colleges at Brookings and at Rapid City. In deference to the will of the local school authorities, the State-supported institutions claim that they usually reject preparatory students from the immediate vicinity, but at the State college in 1916–17, one-third of the preparatory students were from the county in which the college is located, and the post-office address of most of these was given as Brookings. The remaining students were mostly from near-by counties. The preparatory department at the college, therefore, is not serving the State as a whole.

The school of agriculture at the State college.—The criticism directed at the college preparatory departments may be applied with equal force to the so-called "school of agriculture" maintained by the South Dakota State College at Brookings. This school offers a curriculum covering four years of five months each. It is open to both men and women (the women select home economics subjects in the place of technical agriculture) of any age, over 14 years, provided they have completed the eighth grade in the public school. For the year 1916–17 there were registered in the "school of agriculture" 265 students, of whom 254 were residents of the State of South Dakota. Of this number, 232 were from the counties in which are located State accredited four-year high schools. Seventy-seven per cent of the young women registered for the home economics curriculum in "the school of agriculture" were from counties in which are located approved high schools giving courses in home economics. There is a demand for practical secondary instruction in agriculture and home-making, but it is clearly the function of the local high schools to supply it. Many more young people would continue in school if instruction of this kind could be obtained locally. This is clearly shown by the fact that a large proportion of the enrollment in the "school of agriculture" consists of students from sections near Brookings. Under the provisions and support of the Smith-Hughes act, schools should be established throughout the State where students desiring to take a secondary agricultural course may receive the desired training. These schools will need the encouragement and support of their respective regions.

There is also a demand for practical technical training in agriculture and home economics adapted to the needs of mature students who can not meet regular entrance requirements or who can not avail themselves of the regular college course. The real opportunity of the "school of agriculture" at the college, therefore, is to meet this demand. While the school is open to this class of students, it is not restricted to such, and in consequence classes are composed of persons of all ages. Of the 265 students enrolled in 1916–17, 76 per cent were under 21 years of age and 12 per cent were not more than 16 years of age. It is apparent, therefore, that the students are mainly of secondary school age, and in this respect they are very much like the college preparatory students. The median age of the "school" students is 19 years, while that of the preparatory students is 18 years. About 40 per cent of these students are at least 20 years of age, and may be said to represent the institution's unquestioned clientage.

Commercial courses.—At both the university and the State college secondary instruction in commercial subjects is offered. At the university in 1917–18 there were registered as special students 23 young men and women of high-school age who were carrying commercial subjects only. In all cases these were students from the local high school who by special arrangement were permitted to take commercial work at the university and to receive high-school credit. The university, to this extent, therefore, is still engaged in preparatory work, but in this case the State as a whole is supporting an educational enterprise that benefits only the local community. The number of students taking this work at the university is sufficient to warrant the establishment of a commercial course in the local high school.

Although many of the commercial courses offered by both the university and the State college are of college grade, some are of strictly secondary grade, and are taken mainly by students from the local communities. So long as such facilities are provided by the higher institutions, so long will the local schools defer the introduction of commercial courses and so long will the collegiate institutions be hampered in their generally approved functions.

Music courses.—Both the university and the State college are offering elementary or preparatory instruction in music. Since special fees are imposed upon students of music in either institution, it may be assumed that the work of instructing these local students is self-supporting; and since the high schools are not likely to be affected immediately by this practice, there should be very little objection to the efforts of these institutions to be of service to their local communities. The committee suggests, however, that such service should be promoted as a separate enterprise, and thus remove the danger of criticism arising from "padding" enrollments with noncollegiate students.

The committee recommends that the preparatory departments and all other instruction of secondary grade, except possibly music, at the State-supported higher institutions be discontinued. The reasons for such a recommendation may be summarized as follows:

1. There are now many high schools scattered over the State where students from sparsely settled sections may obtain the necessary preparation for college without going so far from home and usually at less expense.

2. So long as the communities without high schools can send their young people to the State institutions for their college preparation, so long will they defer the establishment of a local high school, which is essential to the general intellectual development of all people of the community.

3. The small and ill-supported high schools of many communities would be greatly stimulated in their development if the students from these communities could be enrolled in the nearest school where the necessary preparation may be obtained.

4. The standards set by the college preparatory departments, unless maintained at the maximum, are likely to be regarded by the high schools as the ideal college preparation and thus put a damper upon continued effort toward improvement.

5. The instructors employed in the preparatory department, especially at Brookings, could be used to relieve a serious condition of

overwork on the part of the instructors in some of the academic departments of the college.

Section 7. TRAINING AND EXPERIENCE OF FACULTY MEMBERS.

Figures for the training and experience of faculty members in the three institutions are summarized in the following table:

TABLE 103.—*Training and experience of faculty members of the State college, the State university, and the State school of mines.*

	Total number.	Highest degree held.				Total years college teaching.						
		None.	Bachelor.	Master.	Doctor.	1	2	3	4	5	6–10	10
Professors	71	4	19	27	21	1	3	3	4	2	19	39
Associate professors	5	0	1	4	0	0	0	0	0	0	2	3
Assistant professors	12	3	2	7	0	0	0	0	1	0	7	4
Instructors	26	5	16	5	0	13	4	2	2	2	2	1
Total	114	12	38	43	21	14	7	5	7	4	30	47

Of the 49 instructors at the university, 34 hold the rank of full professor, while 3 only hold the rank of assistant professor. It would appear to have been the policy of the university to advance men and women rapidly to the highest rank. There is a noteworthy lack of balance between the number of full professors and assistant professors. Here several factors are important, but the financial considerations are not to be overlooked.

About one-third of the staff of instructors have not received professional preparation sufficient to secure for them an academic degree above that represented by the baccalaureate. This fact indicates that a large proportion of the instruction in the university is conducted by instructors whose university training is but slightly superior to that of many of the students under their instruction. This is particularly noticeable in the case of full professors, about one-third of whom possess no degree above the baccalaureate. To a considerable extent, of course, certain lacks in formal collegiate or university training are offset by long experience in college teaching. It is also true that many members of the staff of instructors have pursued advanced work in college or university without securing advanced degrees.

It is noteworthy that of the 15 assistant professors and instructors 3 only have secured their highest degree at institutions other than the University of South Dakota. In such circumstances there is always the danger of educational inbreeding. The dangers of educational inbreeding are also to be observed in the fact that one-half of the total staff have taught college classes at the University of South Dakota only.

On the whole the university employs instructors whose capacity for college teaching has been well attested by successful experience extending over a satisfactory period. Numerous factors render it difficult to estimate the professional attainments and professional contributions exemplified by professional publications, researches, etc. It would appear that members of the faculty of the State university as a whole have rendered significant contributions to the institution, to the State, and to society. In some departments, however, there is a noteworthy lack of such professional contributions as should be expected from members of the faculty of a State university. Efficient instruction itself postulates productive scholarship and research.

Of the 29 full professors and of the 61 members of the State college faculty, 4 only have received the doctor's degree. Nearly one-half of the instructing staff have received no degree above baccalaureate. With due allowance for other factors involved, it would appear that as a whole the faculty of the State college is somewhat below par with reference to such qualifications as may be indicated by the degrees held.

It is worthy of note that 32 out of 61 members of the college staff of instruction have had experience in college teaching at the State college only. It is not improbable that the college would benefit from the presence on its staff of a larger proportion of men and women who have had experience in other institutions and who, as a result of that outside experience, might contribute much to college ideals and methods. It is not impossible that the maintenance of present conditions may lead to some degree of educational inbreeding.

On the whole, the State college employs instructors whose capacity for college teaching has been approved by successful experience extending over a period of years. In this connection, however, the point raised above should not be neglected.

Of the 61 members of the staff, 10 only have made contributions through publications within the past two years. The total number of publications within that period was 21. It would appear that members of the State college faculty have, as a whole, failed to manifest through publications that evidence of research and professional interest which may justly be expected. Noteworthy exceptions to the above statement do not invalidate the essential justice of the charge for the faculty as a whole.

From such evidence as the survey committee has been able to secure there is every reason to believe that the State college is well meeting its obligations as a land-grant college to contribute to the development of the agricultural interests of the State. Through its experiment station, through its extension division, and through the individual activities of members of the family, the college is making significant contributions.

The survey committee makes the following recommendations:

(1) As opportunity offers in the employment of new members of the instructional staffs, the officers of the State university and of the State college should attempt to secure men and women whose qualifications are attested by the attainment of higher degrees received from institutions of standing. This is particularly true for the State college. In making such a recommendation the committee is well aware of the inadequacy of considering advanced degrees as satisfactory evidence of the qualities desired. It is nevertheless true that advanced degrees are one of the few rather definite indications that prospective members of the faculty have at least had the opportunity to secure the kind of advanced training which should be expected of instructors at the university or at the State college.

(2) In the future, officers of the State university should be on their guard against the tendency to advance faculty members so rapidly that the instructional staff is overbalanced with men and women holding the highest teaching offices in the institution. At present, the number of full professors is out of proportion to the number of assistant professors and instructors.

(3) Administrative officers of the State university and of the State college should be on their guard against the dangers of educational inbreeding. The vitality of any higher institution is intimately dependent on the infusion from without of new ideals and of new methods. The fact that more than one-half of all instructors in the higher institutions of South Dakota have had experience in those institutions only suggests the possibility that educational inbreeding may be a real danger.

(4) With notable exceptions, it would appear that members of the faculties of the higher institutions of South Dakota are not completely fulfilling legitimate expectations with respect to productive scholarship. The close relation which exists between effective instruction and research would justify the suggestion that administrative officers encourage research and contributions by a larger proportion of the instructional staffs (*a*) by considering the capacity for productive scholarship as one of the qualifications to be looked for in employing new faculty members, (*b*) by so arranging the burdens of teaching that time and facilities may be available for research, (*c*) by direct stimulation, (*d*) by demanding a salary budget sufficient to attract men and women with the capacity for extra instructional work as a regular part of their employment.

Section 8. THE WORK OF FACULTY MEMBERS.[1]

For the State university as a whole (excluding the college of music, not here considered), the average number of semester teaching hours per instructor is satisfactory. On the other hand, the average number of student clock hours per instructor is low. The Bureau of

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[1] The interrelation of many factors renders difficult the measurement of the services of faculty members in any institution. Few members of the faculty perform services which are limited to the classroom or laboratory. Each, to some extent, must render services on various committees and be responsible for many extra classroom duties necessary for the effective administration of the institution. Furthermore, members of the faculty should be expected to engage in forms of productive scholarship which can not be measured in terms of teaching hours. In addition, heads of departments, deans, and other instructors who are responsible for various forms of administrative activity must necessarily devote no small part of their time and energy to college tasks which are not readily susceptible to ordinary measurement. For these reasons the services of any instructor must be considered as including not only his work in class activities involving direct instruction but also his work in various forms of administrative activities.

The actual amount of time expended by any instructor in classroom or laboratory is easily measured. Here again, however, a number of variable factors enter, serving to render interpretation and evaluation difficult. Obviously the energy and time demanded of different instructors in connection with the work of instruction differ in many ways, in the number of students under instruction, in the charcter of the prepartion necessary for any single class meeting, in the labor entailed in the correction of papers, themes, exercises, reports, conferences, etc. It is obvious, therefore, that no single measure can give a complete indication of the services rendered by various instructors.

Students' programs of work are commonly estimated in terms of "credit hours." Ordinarily this is the same as a "semester hour," which means one hour of work per week for a half year. The basis of the measurement is the lecture or recitation period, with its accompanying amount of preparation. Usually two or three hours of laboratory or field work are considered as equivalent to one hour of recitation, quiz, or lecture. This is on the assumption that every recitation, quiz, or lecture presupposes about two hours spent in preparation, while laboratory or field work commonly requires little or no previous preparation by the student.

In measuring the instructional work of faculty members two methods may well be employed, either supplementing the other as an indication of the amount of service performed. One of these methods uses the number of hours spent by the instructor in the classroom or laboratory as the unit, assuming that two hours of work in the laboratory are approximately equivalent to one hour of lecture, quiz, or recitation. This unit, therefore, is essentially the same as the "credit hour." For convenience it may be called the "semester teaching hour." However, when this unit is the only unit of measurement applied a wide margin of error is possible in many cases. For instance, an instructor in Greek may give four courses, each meeting three class hours per week for a half year. His total semester teaching hours would then be 12. His colleague in English department may give four courses, likewise meeting three times per week each, with a total of 12 semester teaching hours. If, however, the enrollments in the Greek courses are 3, 2, 4, and 5 students, respectively, and the enrollments in the English courses are 50, 28, 35, and 40 students, it is clear that the teaching load of the English teacher is much heavier than that of his colleague in the Greek department, especially with the extra classroom work involved in the correction of written work.

The second method available for the measurement of instructors' teaching loads is the "student clock hour." It may be described thus: One student under instruction in lecture, quiz, recitation, or laboratory work for at least 50 minutes net represents one student clock hour. Twenty students in one class which meets one 50-minute period per week for one semester would give a total of 20 student clock hours. If that same class meets three times per week the number of student clock hours would be 60. It will be noted that with this unit one period spent by the teacher in laboratory work or field work counts equally with one period spent in lecture, quiz, or recitation. Doubtless in some cases the teacher's burden in laboratory work is less than in classroom work. In other cases the arrangement of apparatus and planning of the work necessitates fully as much labor and time as might be spent by the instructor in connection with a lecture or recitation period. It should be obvious that the relation between classroom and laboratory work for the teacher is far different from that for the student.

The use of the semester teaching hour as the only unit, or the use of the student clock hour as the sole unit, might well lead to very false estimates of the services performed by different instructors. Either may well serve as a cross check on the other. Hence, in this investigation, both units were employed.

Education has previously suggested that in an institution where research work is to be encouraged and expected, it is reasonable to expect also a departmental average of 250 student clock hours for each instructor per semester. This would be the equivalent of 10 semester teaching hours per instructor with classes averaging 25 students each—a reasonable working standard. In a college where the greater part of the work of instruction is limited to undergraduate work, an average of 300 student clock hours per semester for each instructor would not appear to be excessive. This would be the equivalent of 12 semester teaching hours per instructor with classes averaging 25 students each. The average number of teaching hours for an instructor per semester is about 13 for the university as a whole, while the average number of semester clock hours per instructor is only 219. Here is further evidence of the fact, noted elsewhere n this chapter, that there is an excessive number of small classes n the university. The existing situation calls for the attention of administrative officers.

In the college of engineering there is found an excessive burden of semester teaching hours per instructor combined with a low number of semester student clock hours per instructor. This is due to an excessive number of small classes, which in turn is due to the policy of duplication in engineering courses permitted by the regents of education. In the college of law the situation is satisfactory. In the college of medicine the average number of semester teaching hours s excessive, while the number of semester student clock hours is somewhat below standard. This situation is in part due to the fact that he college of medicine is in a stage of development, perhaps even of experimentation, and in part to the fact that its special character as very complex professional department places it in a category somewhat different from other departments of the university. Means hould be taken to reduce somewhat the present excessive burdens of nstruction imposed on the force of instruction in this department.

In the college of arts and sciences the number of semester teaching ours per instructor is satisfactory, while the number of semester student clock hours is excessively low. Here in particular there is eed for administrative recognition of the deleterious effects of a arge number of small classes. While the average teaching load for nstructors in the college of arts and sciences is not excessively heavy, n some departments there is evidence that the teaching burden of ertain instructors should be reduced at once. An instance is found n the case of the assistant professor of English, who in 1916–17 ad 21 hours of classroom work in each semester and whose burden f student clock hours was 469 during the first semester and 388 durng the second semester. During the first semester the number of his student clock hours was equal to the combined student clock hours of the professor (and dean) of economics, the professor of fine arts, the professor of Greek, the professor of Latin, and the professor of civil engineering. His combined student clock hours for both semesters were more than the total combined student clock hours of the professor of economics, the professor of fine arts, the professor of Greek, the professor of journalism, the professor of Latin, and the professor of mathematics.

In several cases there is evidence of an excessive number of semester teaching hours combined with a relatively small number of semester student clock hours. Instances may be found in the cases of the professor of English, the instructor in English, the professor of Greek, the professor of history and political science (second semester), and the professor of Latin.

For the State college as a whole the average number of teaching hours per instructor and the average number of student clock hours per instructor are not excessive.

In some cases the burden of teaching is apparently excessive. This would appear to be the case for the associate professor of agronomy, of whose time only five-elevenths is supposed to be devoted to instruction. During the first semester his burden of teaching hours was 17 and his burden of student clock hours 338. This would also appear to be true of the professor of botany, whose total student clock hours were 430 for the first semester and 378 for the second semester. The abnormally heavy program of the associate professor of chemistry and of the assistant professor of chemistry may be explained in part, but not wholly, by the absence on leave of the professor of chemistry during the second semester. Likewise the excessively heavy burden of the instructor of pharmacy during the second semester may be explained by the death of the professor of pharmacy. The burden of the professor of English was excessively heavy during the first semester.

The effect of small classes is to be noted in civil engineering, electrical engineering, and experimental engineering, where the relatively large burden of teaching hours is accompanied by a relatively small burden of student clock hours in civil and electrical engineering. This has its bearing on the problem of duplication in engineering courses elsewhere discussed.

The excessive programs of work carried by some instructors are illustrated by the following: During the first semester the professor of civil engineering provided 12 periods of recitation or lecture and 36 periods of laboratory work in addition to some instruction in the preparatory school. During the second semester the professor of metallurgy provided 18 periods of recitation or lecture and 21 periods of laboratory work. During the same semester the professor of geology and mineralogy provided 17 periods of recitation or lecture and 19.5 periods of laboratory work in addition to some preparatory-school instruction. Such programs as these are totally indefensible.

Summary.—On the whole the number of teaching hours per instructor in the collegiate institutions of the State is generally satisfactory, though important exceptions are numerous and considerable variability is found. The attention of administrative officers is called to all instructors' programs which show semester teaching hours above a standard of 15. From the figures presented it is clear that in general the number of student clock hours is in general rather low, though here again variability is found, and in many individual cases noteworthy departures from a reasonable standard are to be observed. The attention of administrative officers is called to wide variations from the standard as shown by the tables given above.

Particularly noteworthy is the fact that in many cases, and in the averages for institutions, satisfactory or even excessively high teaching-hour burdens are accompanied by excessively low student clock-hour burdens. This is, in many cases, at least, due to the large number of courses enrolling few students. The remedy in some of these cases will doubtless be found in the exercise of greater care in the offering and giving of courses enrolling few students.

On the basis of the data available, the survey committee feels justified in making the following recommendations:

(1) A working standard should be adopted for teachers' programs of instruction. The committee suggests that the number of teaching hours per semester for an instructor on full time for instructional purposes be set at not more than 15 and that the number of student clock hours per semester for an instructor be set at between 250 and 300, according to the nature of his work.

(2) Excessive teaching programs at present found should be reduced. Officers should make a careful investigation of instructors' programs at least twice a year for the purpose of adjusting any unnecessarily great variability.

Section 9. SALARIES.

The primary factor determining the salaries to be paid to faculty members in any institution is the maintenance of a sound educational policy. In the long run the quality of instruction is vitally affected by the salaries paid. Other things being equal, the payment of good salaries will attract and retain good instructors. Other things being equal, the payment of low salaries sooner or later will prevent good instructors from joining the faculty or will lead such good instructors as may be secured to consider the institution merely a stepping stone to more remunerative positions in other institutions.

Salaries in other universities and colleges.—The following are the maximum and minimum salaries paid to faculty members of various grades in different colleges and universities throughout the country:

TABLE 104.—*Average maximum and minimum salaries in 90 State colleges and universities in 1915–16.*

Positions.	Size of faculty.				
	Under 26.	26 to 50.	51 to 100.	101 to 200.	Over 200.
President[1]	$3,828	$4,578	$5,023	$5,933	$8,139
Deans, maximum	2,050	2,969	3,054	3,100	5,128
Deans, minimum	2,050	2,238	2,409	2,418	3,147
Professors, maximum	2,423	2,300	2,645	2,770	4,189
Professors, minimum	1,742	1,776	1,879	1,883	2,256
Associate professors, maximum	1,780	1,825	1,922	2,043	2,530
Associate professors, minimum	1,367	1,550	1,691	1,700	1,750
Assistant professors, maximum	1,514	1,658	1,638	1,750	2,303
Assistant professors, minimum	1,350	1,383	1,314	1,305	1,469

[1] In the majority of cases the president's house is also provided.

When figures for the State college and for the State university in South Dakota are compared with figures for other institutions of somewhat similar character it appears that, while the maximum salaries are not notably low, the minimum salaries are distinctly low and the number of professors, associate professors, and assistant professors receiving low salaries is great. With the exception of a few faculty members (who, for the most part, occupy also administrative offices or have other duties in addition to their instructional duties), instructors at the collegiate institutions of South Dakota receive salaries quite inadequate, whether viewed from the standpoint of conditions peculiar to South Dakota or from the standpoint of comparison with other institutions of the same character. This is, of course, particularly true for the State school of mines.

At present all three institutions are fortunate in having a relatively large number of faculty members whose long and efficient service to their respective institutions is neither determined nor measured by purely financial considerations. However, in the natural course of events new instructors must be added to the staffs in order to replace those whose services are terminated and to provide for developments inevitable in the growth of the institutions. Unless the salary schedules are materially raised in the near future the State of South Dakota can not hope to attract or retain efficient instructors. In fact, the State university and State college already feel their inability under present conditions to compete with other institutions of the same rank. The State can not afford to engage inferior instructors or to permit its collegiate institutions to become merely convenient stations where promising young men and women may gain their experience in college teaching, only to devote their ears of productive teaching and scholarship to other institutions vhich pay better salaries. In raising the general schedule for collegiate instructors the State would perform not an altruistic service to college instructors, but a service to itself. The primary consideration for the State is in the problem of its own interests.

In connection with the problem of salaries at the State university it is worthy of note that successive presidents of the institution repeatedly called attention to the necessity of increases if the work of the university is to be rendered effective. But in spite of some increases in salaries at the State university within the past few years, the salary schedule as a whole is far too low to secure or retain men and women equipped for the work which should be expected in a State university. In this connection it is worthy of more than passing interest that budget estimates at the State university have always passed through a double "paring down" process. This is clear from the figures presented in the following table:

TABLE 105.—*Salary estimates, recommendations, appropriations, and payments at the State university.*

College year.	Recommendations by the president.	Recommendations by the regents.	Appropriation by the legislature.	Actually disbursed for salaries.[1]
1905-6	$45,000	[1] $45,000	$40,000	$47,398
1906-7	50,000	[2] 50,000	40,000	48,204
1907-8	50,000	50,000	45,000	55,762
908-9	50,000	50,000	45,000	55,364
909-10	65,000	60,000	55,000	63,107
910-11	65,000	60,000	55,000	68,716
911-12	80,000	70,000	65,000	74,936
912-13	80,000	70,000	63,000	82,332
913-14	90,000	80,000	70,000	96,363
914-15	90,000	80,000	70,000	91,686
915-16	110,000	90,000	78,000	103,858
916-17	110,000	90,000	82,500	....
917-18	120,000	110,000	93,000	....
918-19	120,000	110,000	97,000	....

[1] Appropriations, plus tuition fees and other "local funds."

[2] Revision by regents at the request of the legislature reduced these two recommendations to $43,000 ach.

It would appear that the regents of education had adopted the icious policy of reducing the president's estimates by approximately 0 per cent and that the legislature had adopted the further vicious olicy of reducing by approximately 10 per cent the recommendaions of the board which it itself has established to examine the eeds of the institution. The double "paring-down" policy can ave no justification.

Study of the salary figures for the State school of mines shows hat the salaries paid to full professors are approximately the salaies paid to fairly good high-school teachers. The principal of he Sioux Falls High School receives a salary of $3,100. The president of the State school of mines receives a salary of $3,000. The average salary of the eight highest-salaried teachers in the Sioux Falls High School is $1,556. The average salary of the eight full professors at the State school of mines is $1,590.

Summary.—Certain important conclusions may be drawn concerning the salary schedules of the three institutions under consideration:

(1) With relatively few exceptions the salaries paid to faculty members in the State university, the State college, and the State school of mines are low—so low that the efficiency of instruction is seriously imperiled.

(2) With an average salary of $2,000 and a standard teaching program of 500 to 600 student clock hours per week for both semesters combined (250 to 300 per week per semester), an average cost of instruction per student clock hour would be between $3 and $4 for salaries. Where salary costs rise above that figure one may expect to find—(*a*) too few classes taught, (*b*) small enrollments in classes, or (*c*) unusually high salaries paid. Where salary costs fall below those figures one may expect to find (*a*) teaching program too heavy, (*b*) overlarge classes, or (*c*) low salaries.

(3) The machinery whereby salary budgets are determined is faulty. The best educational interests of the State are not conserved when a double "paring-down" process is performed by the regents of education and the legislature. Salary costs do not fall within the same category in this respect as do expenditures for buildings, etc. Definite salaries should be set for positions of rank from assistant professor up and the budget therefor fixed accordingly. It is beneath the dignity of the State to bargain with individuals concerning the salaries to be paid for professional work.

On the basis of its investigation the survey committee makes the following recommendations designed to remedy the defects considered above.

(1) The establishment of a salary schedule for faculty members of rank from assistant professor to dean. An average of $2,000 per department should be considered as a reasonable mean. The minimum salary for dean or other officer performing similar duties should be set at $3,000. The minimum salary for a full professor should be set at not less than $2,500. The minimum salary for an associate professor or an assistant professor should be set at not less than $2,000.

(2) In each case where the salary cost per student clock hour is more than $4 per department the administrative officers of the institution should determine whether that excessive cost is due (*a*) to excessively high salaries, (*b*) to deficient teaching programs, (*c*) to an excessively large number of classes with small enrollments, or

(*d*) to some factor peculiar to the particular work. Efficient administration can well remedy some of the defects thus disclosed.

(3) In each case where the salary cost per student clock hour is less than $3 per department the administrative officers of the institution should determine whether that excessively low cost is due (*a*) to teaching programs which are excessively heavy, (*b*) overlarge classes, (*c*) excessively low salaries. Certain defects in the present situation may readily be corrected.

(4) The legislature should cease to place the salary budgets of the three institutions in the same category with financial budgets involving buildings, new ventures, or even equipment and maintenance. Neglect to appropriate desired money for buildings, expansion, even maintenance and equipment creates but temporary loss. Parsimony in salaries is more serious and frequently leads to permanent injury to the institution. Expenditures for material equipment, for maintenance, for expansions in the work of the institutions, or for buildings and land may be somewhat irregular without serious and lasting damage being done. Salaries, on the other hand, must from their very nature be essentially regular in maintenance and increase. The legislature would do well to encourage a settled salary policy in the various institutions, even with the expectation that that policy must change as conditions change.

Section 10. THE COST OF HIGHER EDUCATION.

South Dakota ranks seventeenth among the 48 States on the basis of the amount spent on higher education for each thousand dollars of wealth. Compared with two western States having approximately the same population, South Dakota spent for the year given in the census report about 7 per cent more than Oregon and 15 per cent more than North Dakota, although recognition should be made of the variable factors which enter into these comparisons.

South Dakota ranks sixteenth on the basis of per capita receipts of higher educational institutions, including normal schools. But the per capita receipts of South Dakota are considerably less than those of the States mentioned above, Oregon and North Dakota exceeding South Dakota by 11 per cent and 32 per cent, respectively.

Notwithstanding the apparent liberality of the taxpayers in supporting the educational work of the State, there is good reason to believe that a much greater liberality will be necessary in order to reach the highest standards of education which are in demand by wealthy and rapidly growing States. Attention is also called to the fact that Iowa and Minnesota, States with much greater population and wealth than South Dakota, are spending from 4 to 21 per cent more per capita.

Per capita costs of higher education.—Tables 106 and 107 show the cost per student at the State institutions of South Dakota in comparison with those of Washington, Iowa, Nevada, and Arizona.

TABLE 106.—*Comparative per capita cost of higher education in the States of Washington, Iowa, Nevada, Arizona, and South Dakota.*

(Based on the average enrollment.)

	Washington.		Iowa.		
	1913–14		1913–14		
	State university.	State college.	State university.	State college.	Teachers' college.
Number of students enrolled in first semester	2,263	947	2,343	2,292	[1] 1,287 1,348 1,245
Number of students enrolled in second semester	2,373	972	2,235	2,207	
Total enrollment	4,636	1,919	4,580	4,559	3,926
Average attendance for the year	2,318	959.5	2,299	2,279	1,309
Total operating expenses, excluding summer school	$517,505.00	$343,865.00	$629,069.24	$616,654.33	$220,018.22
Cost per student of average attendance	$223.49	$358.37	$275.00	$270.00	$168.00
	1914–15		1914–15		
Number of students enrolled in first semester	2,724	1,013	2,416	2,522	[1] 1,4[illegible] 1,4[illegible] 1,3[illegible]
Number of students entolled in second semester	2,645	956	2,303	2,467	
Total enrollment	5,369	1,969	4,719	4,989	4,2[illegible]
Average attendance for the year	2,684.5	984.5	2,360	2,495	1,41[illegible]
Total operating expenses, excluding summer school	$517,505.00	$285,299.00	$648,195.10	$677,146.68	$241,007.5[illegible]
Cost per student of average attendance	$192.77	$289.79	$274.50	$271.00	$170.0[illegible]

	Nevada.	Arizona.	South Dakota.		
	1914–15	1915–16	1915–16		
	State university.	State university.	State university.	State college.	School of mines.
Number of students enrolled in first semester	310	403	558	....	67
Number of students enrolled in second semester	316	....	505	....	62
Total enrollment	626	....	1,063	....	129
Average attendance for the year	313	[2] 413	531	358	65
Total operating expenses, excluding summer school	$138,717.96	$165,510.90	$144,078.07	$158,955.00	$36,680.51
Cost per student of average attendance	$443.18	$400.73	$271.30	$441.21	$564.32
	1915–16		1916–17		
Number of students enrolled in first semester	328	....	631	....	116
Number of students enrolled in second semester	331	....	622	....	78
Total enrollment	659	....	1,253	....	194
Average attendance for the year	329.5	....	626	365	97
Total operating expenses, excluding summer school	$172,254.23	....	$151,059.00	$170,947.71	$33,961.57
Cost per student of average attendance	$522.77	....	$241.29	$468.35	$350.12

[1] Terms.

[2] Registrar.

Table 106 gives in detail the enrollment, average attendance, total operating expenses, excluding those of the summer school, and the cost per student based on the average attendance for two successive years. Although a number of the surveys were made a year or two before that of South Dakota, this difference probably does not seriously detract from the value of the comparisons. Table 107 compares in minimum and maximum order the costs for each year of the two included in the survey of all the State institutions under discussion. The median cost is also indicated. Table 108 compares the average cost based on the two years and shows the relative position of each institution in the minimum and maximum order. Special attention is called to the position of the State college and the school of mines as shown in these tables.

TABLE 107.—*Per capital costs of instruction in the institutions surveyed by the Bureau of Education, giving each year in minimum-maximum order.*

Iowa State Teachers' College, 1913–14	$168.00
Iowa State Teachers' College, 1914–15	170.00
Washington State University, 1914–15	192.77
Washington State University, 1913–14	223.49
South Dakota State University, 1916–17	241.29
Iowa State College, 1913–14	270.00
Iowa State College, 1914–15	271.00
South Dakota State University, 1915–16	271.30
Iowa State University, 1914–15	274.50
Iowa State University, 1913–14	275.00
Washington State College, 1914–15	289.79
South Dakota State School of Mines, 1916–17	350.12
Washington State College, 1913–14	358.37
Arizona State University, 1915–16	400.73
South Dakota State College, 1915–16	441.21
Nevada State University, 1914–15	443.18
South Dakota State College, 1916–17	468.35
Nevada State University, 1915–16	522.77
South Dakota State School of Mines, 1915–16	564.32
Median	275.00

TABLE 108.—*The per capita costs based on the average of the two years includ in each survey.*[1]

Iowa State Teachers' College, 1913–15	$169.0
Washington State University, 1913–15	208.1
South Dakota State University, 1915–17	256.2
Iowa State College, 1913–15	270.5
Iowa State University, 1913–15	274.7
Washington State College, 1913–15	324.0
Arizona State University, 1915–16	400.7
South Dakota State College, 1915–17	454.7
South Dakota State School of Mines, 1915–17	457.2
Nevada State University, 1914–16	482.9

Suggested basis of comparing costs.—A study of the accompanying tables shows that the per capita costs of the State college and the State school of mines are very high. While it is impossible to determine arbitrarily what the per capita cost should be, it is suggeste that in the light of previous surveys the cost figure for a universit of recognized standards, such as the Iowa State University, may b made a suitable basis of comparison. This figure, $275, which als happens to be the median cost, as shown in Table 107, may be use in comparing costs for the years 1915–1917, and is one that is als in harmony with the cost figures suggested by the Bureau of Education in its previous surveys.

Institutions compared.—If the average cost per student at th university were $275, the total expenses would be $169,036.46; the now are $147,568.83, or 12.7 per cent less than the suggested standard

If the average cost per student at the State school of mines wer $275, the total expenses would be $21,406.64; they are now $35,321.05 or 65 per cent more than the suggested standard.

According to Table 108 the per capita cost of instruction at th State university (based on the average of two years) is $14.21 les than that of the Iowa State University; the per capita cost at th State college is $183.72 more than that of the Iowa State Colleg $198.48 more than that of South Dakota State University, an $276.76 more than that of the Iowa State University. The cost a the school of mines is approximately the same.

Observations and conclusions.—The foregoing data go to sho that the university is the only State institution of higher educatio which is operated at a figure below the suggested standard. It i therefore possible to incur additional expense of about $20,000 annually for the needs of the university, whether it be for increased salaries, as brought out in another section, or for other purposes, without going beyond the suggested standard.

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[1] Arizona includes one year's report only.

While it is only fair to recognize that technical institutions such as the State college and the State school of mines may reasonably expect a higher per capita cost of instruction than at the State university, yet it is apparent that the State of South Dakota is not getting, nor is it as yet in a position to get, full value for the money expended at these institutions under their existing organizations.

If the plan for consolidation should be accepted, not only a reasonable reduction in general overhead expense would result, but there would be the release annually of from $50,000 to $60,000, which could be used to excellent advantage in increasing salaries, improving the institutional equipment, and general upkeep.

If consolidation is not considered advisable, the organization of the curricula at the State college and the State school of mines, in harmony with the recommendations respecting major and service lines, will doubtless effect a large reduction in the $70,000 to $80,000, which is the excess above a total operating expense based on a median per capita cost of $275.

Section 11. SUMMARY OF RECOMMENDATIONS RELATING TO HIGHER EDUCATION.

The primary recommendation of the committee involves the consolidation and reestablishment in a central location of all three higher institutions and the establishment, possibly at the abandoned sites, of three junior colleges under the direction of the consolidated university. If the State accepts such a policy, all difficulties of duplication disappear. If, on the other hand, it is not willing to adopt such a policy, it will be necessary to assign special fields to the various institutions and to suggest certain modifications in organization. In view of such uncertainty the committee presents the following substitute recommendations:

1. The instruction in engineering now offered at the school of mines should be transferred to the State college. In place of the present school there should be established a junior college under the general direction of the State university.

2. The principle of major and service lines should be applied to higher education in the State as follows: Major lines at the State university should include liberal arts, law, medicine, pharmacy, commerce, music, art, and the training of school executives, school administrators, and secondary school teachers other than those of agricultural, home economics, and industrial subjects.

Major lines at the State college should include agriculture and it related fields, home economics, engineering, mining and metallurgy and the training of secondary school teachers and general supervisors in these subjects.

3. Until conditions warrant it, graduate instruction in advance o the master's degree should not be offered at either institution.

4. Secondary instruction at the higher institutions should be discontinued. This includes the following: (*a*) That offered by th preparatory departments at the State college and the school of mines (*b*) That offered by the department of music at the State universit and the State college. (*c*) That offered by the department of commerce at the State university and the State college. (*d*) That offere by the school of agriculture at the State college, except to students of mature years. (*e*) That offered to special students, except thos who meet the regular entrance requirements or who are of mature age

5. To insure better articulation between institutions of higher an secondary grade there should be provided an adequate system o high-school inspection and accrediting through the medium of th State department of public instruction. Admission to the high institutions should be granted to all graduates of approved four-ye high schools of the State and to candidates from other States wh present certified credit for work equivalent to graduation from four-year high school of the State. Conditional admission should b granted only to candidates who meet the general requirement an who are deficient in certain studies which are regarded as prerequisit to the chosen curriculum. In place of the present disjointed statement concerning prescribed subjects for admission and graduatio there should be provided for each line of specialized study offered b the State's higher institutions a published statement showing what i believed to be appropriate sequences of studies and an acceptabl amount of coordinated work covering the combined high school an college periods.

6. While South Dakota in comparison with some other State has liberally supported higher education, it must continue to increas its maintenance funds to provide for the growing demands. To thi end the State should provide a millage tax, as recommended i Chapter IX. The budget plan for the disbursement of funds withi each institution should be generally adopted and other improvement in financial procedure should be introduced.

7. More complete permanent records of students' work and achievements should be kept. The State college, after investigating th methods of other institutions, should revise its entire scholastic recor system.

8. The functions of the office of dean should be clearly defined an should include, among other functions, the responsibility for th

formulation of well-connected curricula and the development and maintenance of strong teaching organizations.

9. A working standard should be adopted for teachers' programs. In general an instructor should not carry more than 15 hours per week and the instructional load should be from 250 to 300 clock hours.

10. A careful examination should be made of the courses offered by the higher institutions, with a view to determining, first, the courses justifiably offered on the grounds that they meet real and worthy needs and are for the proper development of institutional aims; and third, the courses now offered that may be dispensed with on the ground that they are superfluous or that they practically parallel other courses within the same or other departments. To mitigate the evil of small classes the administrative officers of each institution should give closer supervision to the departmental offerings. Special attention should be given to the possibilities of the alternative plan and to the possibility of reducing the number of similar courses in departments showing an excessive number of small enrollments.

11. As opportunity offers in the employment of new members of the instructional staffs the officers of the higher institutions should secure men and women whose qualifications are attested by the attainment of higher degrees received from institutions of standing and those whose qualifications include a capacity for productive scholarship. The administrative officers should guard against the dangers of educational inbreeding.

12. The State should establish a definite policy regarding salaries at the several institutions, including a salary schedule for faculty members from assistant professor to dean. The present practice of considering salary requirements in the same category as appropriations involving buildings, expansions, or even equipment and maintenance, should be discontinued.

13. With a view to developing and maintaining efficient working staffs, the administrative officers should give serious consideration to such matters as opportunities for professional improvement, retiring allowances, comfortable living conditions, convenient and suitable office facilities, adequate working equipment, freedom of initiative, etc.

THE UNIVERSITY.

14. The college of law should be organized on the basis of a four-year course.

15. The extension work of the university should be more liberally supported and more definitely organized and its policies concerning standards should be more clearly defined.

16. The department of education should be reorganized as a distinct school of education in charge of a dean. Such an organization should include a practice high school for supplying the facilities for practice teaching.

THE STATE COLLEGE.

17. The proportion of technical work required for the agricultural curriculum should be increased, especially in farm mechanics and agricultural engineering.

18. Each of the agricultural departments should include all technical experts in the subject concerned, whether engaged in teaching, research or extension. The practice of grouping science experts, such as soil chemists, dairy bacteriologists, etc., with the technical departments rather than with their respective science departments, should be discontinued.

19. The work in home economics at the State college should be reorganized as a distinct division.

20. Better facilities and increased appropriations are recommended for the library at the State college.

21. The teacher-training work at the State college should be expanded. To meet immediate needs the work may be organized as a department in the general service division, with major options in agricultural education, industrial education, and home economics education. Specialists in the methods of teaching these subjects and in rural life should be provided to work in close touch with the respective divisions of the college. Adequate provision should be made for practice teaching.

Chapter XXI.

SUMMARY OF THE MOST IMPORTANT RECOMMENDATIONS CONTAINED IN FOREGOING CHAPTERS, CLASSIFIED AS LEGISLATIVE AND ADMINISTRATIVE.

Section 1. LEGISLATIVE.

1. The enlargement of the present State board of regents of education with the following powers and duties:

(*a*) To retain and continue all the powers and duties now held under law for the administration of the State university, the State college, and the State normal schools.

(*b*) To have general oversight and control of the public-school system of the State.

(*c*) To choose a superintendent of public instruction as the executive official of the State board of education and head of the State department of education.

(*d*) To require uniform records and reports, in form to be prescribed by the superintendent of public instruction, from all educational institutions supported by the State, and from all other organizations doing educational work receiving State accreditment and recognition.

(*e*) To classify and standardize, under the direction of the State superintendent, the public schools of the State.

(*f*) To prescribe the standards and courses of study for the State normal schools, the educational departments of the denominational colleges and academies accredited under State law, and such other teacher-training institutions as may be established by law.

(*g*) To adopt rules and regulations for the sanitary inspection of schools and for the physical examination of school children, and, in conjunction with other State authorities, to see that the rules relating to school health, compulsory education, and child conservation be enforced.

(*h*) To have general control of the schools for the deaf and the blind and the industrial school for boys and girls.

(*i*) To act as a board of control for the State library and State historical collections.

(*j*) To transmit to the governor and the State legislature a biennial report covering all the activities of the university, the State colleges, and the State department of public instruction in its relation to all public elementary and secondary schools and the above-mentioned higher educational institutions of the State.

(*k*) To perform such other duties and functions as are prescribed by law.

2. The reorganization of existing school districts outside of incorporated towns and cities in the State as follows:

(*a*) Legal disestablishment of all common-school districts as now organized in all counties with a school population of more than 2,000 children of school age outside of present independent town and city districts[1]; permissive disestablishment of all common-school districts in all other counties; and the establishment in lieu thereof of the county as a single school district.

(*b*) The abolition of the present district school boards in all counties of more than 2,000 children of school age outside of the present independent town and city independent districts and organization in lieu thereof in these and all other counties of county boards having the following powers and duties:

(1) To enforce the laws relating to education and the rules and regulations of the State board of regents of education within their respective counties.

(2) To elect a county superintendent and appoint such deputy county superintendent and necessary supervising officials as may be provided for under law.

(3) To appoint one subdirector for each school community within their jurisdiction, provided the county is organized on the county-unit plan.

(4) To have direct charge of all county schools in counties of more than 2,000 children of school age and in such other counties as take advantage of the county-unit act, including closing unnecessary schools, building new schools, consolidating schools, and conveying children to school at public expense, and organizing rural high schools.

(5) To elect all teachers on nomination by the county superintendent.

(6) To levy a uniform school tax on all the taxable property of the county under legal limitations, and to expend the funds thus procured to equalize educational advantages among all the school children of the county.

(7) To exercise such other powers and duties not enumerated above but which are prescribed by law.

3. The improvement of school enrollment and daily attendance by appropriate legislation, as follows:

(*a*) To begin the school year on January 1 of each year and close the same on December 31, thus making it possible to retain the same teachers throughout the growing season of the year, which should be the most important session of rural schools.

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[1] See note on page 30.

(*b*) To lengthen the teaching year to a minimum of nine school months of 20 teaching days each, provided that the teaching hours may be shortened during the season or seasons of the year when pupils' labor is essential to agricultural and other industrial work.

4. The improvement in stability and growth of the public-school system through the following definite modifications in the present system of taxation for school purposes:

(*a*) The adoption of the county as the unit of taxation; these funds when collected to be used to equalize educational advantages over the county.

(*b*) The local school community to be authorized to levy taxes and to issue bonds under legal limitations for extraordinary purposes only, such as erecting new buildings and procuring larger sites and school farms.

(*c*) Levying of a State tax equivalent to not more than one-third of the whole school maintenance of the State (including the present permanent school fund).

(*d*) Adoption of a permanent millage tax for the maintenance of the State's higher educational institutions to be apportioned according to the needs of each institution to supplant the present legislative appropriations.

(*e*) Adoption of a new basis for the distribution of the present State permanent fund and future State taxes, as follows:

(1) The permanent fund to be distributed on the basis of aggregate daily attendance and the number of teachers employed, instead of as at present on the basis of school population; provided that weak schools in sparsely settled sections of the State be credited with not to exceed 2,000 attendance days in addition to their actual aggregate daily attendance.

(2) The proposed State taxes to be awarded for consolidation of schools, teacher training in high schools, etc., only when the local school communities have indicated their cooperation by agreeing to certain requirements made by law, a stipulation under which such aid may be received.

5. The improvement of rural education through State aid on the following basis:

(*a*) That no modern one-teacher school shall utilize less than 5 acres of land for grounds and experimental purposes.

(*b*) That every such school shall erect at community expense a cottage on the premises for the teacher.

(*c*) That ample facilities be provided for a sanitary water supply.

(*d*) That ample provision be made for the installation of such sanitary toilet and heating facilities as shall be recommended by the State board of education.

6. The establishment of the present small rural schools as modern consolidated schools and rural high schools by (*a*) passing appropriate legislation looking toward establishing associated or trading-center school areas to embrace a central village and a number of outlying schools; (*b*) creating one county high school of agricultural type in each county in the State, which may or may not be one of the central schools of an associated area; and (*c*) voting liberal State aid for the erection of any school plants and for maintenance.

7. The improvement of teaching conditions by (*a*) establishment of reasonable minimum salaries for all teachers; and (*b*) scaling all teachers' salaries to the grade of certificate held, thus placing a premium on such preparation.

8. Improving of teacher qualifications by (*a*) increasing gradually the entrance requirements of the State normal schools and lengthening their study courses; (*b*) eliminating the present third-grade certificate; (*c*) discontinuing the issue of certificates on examination as soon as the normal schools, the department of education in the university, and the department of education in the State college, and other teacher training institutions have become fully equipped to supply all the professional teachers required; and (*d*) placing the minimum requirement for permission to teach at graduation from an accredited four-year high school or its equivalent and in addition at least one year's study acquired at a professional school for teachers, the standard to go into effect not before September, 1922.

9. Increase in supply of professional teachers by (*a*) organizing teacher-training departments in not to exceed 20 fully equipped high schools and distributed over the State; the schools to organize the professional work in fifth-year classes and to receive State aid; (*b*) establishing well-equipped departments for rural teachers at all the normal schools; (*c*) enlarging the facilities of the State agricultural college to prepare teachers for vocational agriculture and home economics; (*d*) granting State bonuses to teachers as awards for long service in a single community; and (*e*) establishing a retirement fund for teachers.

10. The division of the State into extension service districts, one for each normal school, within which each normal school shall organize an extension service for the teachers of the State.

11. The preparation of courses of study for the further training of teachers in service, the satisfactory completion of which shall be necessary to secure a permanent license to teach.

12. More liberal financial support of all the normal schools to enable them to reach the largest possible number of teachers to be.

13. The improvement of higher education in the State through the consolidation and reestablishment of a central location of all three higher educational institutions and establishment probably at the abandoned sites of three junior normal colleges under the direction of the consolidated university. If this policy be accepted, all difficulties of duplication will disappear. If, on the other hand, the State be unwilling to adopt such a policy, it becomes necessary to assign special fields to the various educational institutions and to recommend certain modifications in organization. In view of such uncertainty the committee presents the following substitute recommendations:

(*a*) The discontinuance of the school of mines in its present location and the transfer of the instruction in engineering to the State college.

(*b*) A junior college to be established on the present site of the school of mines under the general direction of the State university.

Section 2. ADMINISTRATIVE.

1. The State superintendent of public instruction to be clothed with the following administrative powers and duties:

(*a*) The State superintendent of public instruction shall be the executive official of the State board of regents of education and executive head of the State department of education and shall enforce all the rules and regulations made in conformity to law by the State board for the public elementary and secondary schools.

(*b*) He shall have supervision of all the different divisions of the State department of education and shall be held responsible by the State board for the proper administration of the duties of each such subdivision.

(*c*) He shall, under the direction of the State board and in cooperation with the heads of the State teacher-training institutions and in conformity with law, prepare courses of study for these training schools and prescribe methods and standards for the certification of teachers, and the validation of teaching credentials from other States.

(*d*) He shall personally direct all educational activities wherein the State department of education, under law, cooperates with the presidents and faculties of the higher educational institutions of the State.

(*e*) He shall have such other powers and duties as under law belong to the office of the State superintendent of public instruction.

2. The county superintendent of schools to be clothed with the following powers and duties:

(*a*) To act as executive officer of the county board of education and to execute under their direction the educational policies determined upon by the county board.

(*b*) To act as chief educational official of the county, in which capacity he shall represent the county board of education; to have entire supervisory control of the common schools of his county.

(*c*) To see that the compulsory-attendance act is enforced and the child-welfare laws obeyed.

(*d*) To nominate for appointment by the county board of education one deputy superintendent or professional supervisor for each 50 schools within his county.

(*e*) To supervise the classroom practice of all county schools, either in person or through his assistants.

(*f*) To carry out all policies of the county board of education; to have charge, under the board, of all county schools, including continuation school activities, night schools, part-time schools, short courses, etc., undertaken for the promotion of vocational and other education within the county.

(*g*) To have charge of health education in the county schools, including health inspection done in conjunction with the county board of health, and to direct the work of the county nurse if such a one is appointed.

(*h*) To keep full records of all educational activities within his jurisdiction, and to make reports from time to time to the county board of education and to the State superintendent of public instruction.

(*i*) To examine candidates for special teachers' certificates.

(*j*) To perform such other duties as by law belong to the office of county superintendent.

3. The improvement of school enrollment and daily attendance through—

(*a*) A careful annual census of the school population in all school districts of the State to be made by the authorities now provided by law, but under immediate supervision from the State department of public instruction, on uniform blanks to be furnished by this department. The census to classify the school population as follows: 5 to 18 years, 6 to 21 years, over 8 and under 16 years, 6 to 14 years, and over 14 to 18 years.

(*b*) More effective enforcements of the compulsory-attendance act through the medium of the county boards of education and the county superintendents.

(*c*) A system of records to be provided by the State department of education, to be used in transferring children from community to community, that will make evasion of school attendance impossible.

4. The improvement of rural education through the adoption by the State department of education of minimum standards for modern one-teacher schools, as follows: (*a*) Teacher with specialized preparation for rural teaching; (*b*) school plant to be equipped as

practical laboratory, in which to prepare rural people for their life work.

5. The enlargement of the facilities for preparing teachers in the State normal schools on the following basis:

(*a*) The normal school at Springfield to devote its energies chiefly to preparing rural teachers.

(*b*) The normal schools at Madison and Springfield to devote their energies chiefly to preparing rural and other elementary teachers and special-subject supervisors.

(*c*) The Northern Normal and Industrial School at Aberdeen to devote its energies to preparing rural and other elementary teachers and supervisors, with special emphasis on industrial supervisors.

6. The gradual increase of entrance requirements to graduation from an accredited four-year high school.

7. The granting of no normal-school certificates after the spring session of 1925 for less than the completion of two years of normal work above high-school graduation.

8. The award, after the spring session of 1925, of a two-year course normal-school diploma for the completion of the two-years' course above high-school graduation, and of the advanced normal-school diploma for completion of three-years' course above high-school graduation.

9. The provision by the normal schools for differentiated courses of study of two and three years above high-school graduation.

10. The establishment of special summer and irregular courses to enable teachers in service to fulfill the new academic and professional requirements.

11. The organization of specialized rural-school departments in connection with each of the normal schools.

12. Liberal increase in the salaries of all normal school instructors.

13. The reorganization of the department of education in the University of South Dakota as a school of education in charge of a dean and faculty of education.

14. The organization of a practice high school in connection with the university department of education.

15. The enlargement of the department of education in the State college of agriculture to meet the new demands made upon it under the Smith-Hughes Act.

16. The systematic inspection of the accredited denominational colleges and academies by the State department of public instruction.

17. The readjustment of certification privileges of the denominational schools on the following basis:

(*a*) That Huron College, the Dakota Wesleyan University, and Yankton College alone retain the acquired right to offer life diplomas for the completion of the four-year college course; that these schools abandon the six-year courses now offered because of lack of adequate practice school facilities.

(*b*) That all the other colleges and academies now offering courses leading to State certificates and to first and second grade certificates improve their practice-school facilities and enlarge their professional libraries under the direction of the State department of public instruction in order to retain the certification privileges which they now hold.

18. The improvement of higher education in the State on the following basis:

The principles of major and service lines to be applied to higher education in the State as follows: Major lines of the State university to include liberal arts, law, medicine, pharmacy, commerce, music, art, and the training of school executives, school administrators, and secondary school teachers other than those of agricultural, home economics and industrial subjects. Major lines at the State college to include agriculture and its allied fields, home economics, engineering, mining, metallurgy, and the training of secondary school teachers and general supervisors in these subjects.

19. Graduate instruction in advance of the master's degree not to be offered at either institution until conditions warrant it.

20. Secondary instruction at the higher institutions to be discontinued. This to include the following:

(*a*) That offered by the preparatory departments at State college and school of mines.

(*b*) That offered by the department of music at the State university and the State college.

(*c*) That offered by the department of commerce at the State university and the State college.

(*d*) That offered by the school of agriculture at the State college except to students of mature years.

(*e*) That offered to special students except those who meet the regular entrance requirements or who are of mature age.

21. For the improvement of the University of South Dakota.

(*a*) The college of law to be organized on a basis of a four-year course.

(*b*) The extension work of the university to be more liberally supported and more definitely organized and its policies concerning standards more clearly defined.

(*c*) The department of education to be reorganized as a distinct school of education in charge of a dean and faculty of education to include a practice high school for supplying facilities for practice teaching.

22. For the improvement of the State college of agriculture and mechanic arts.

(*a*) The proportions of technical work required for the agricultural curriculum to be increased, especially in farm mechanics and agricultural engineering.

(*b*) Each agricultural department to include all technical experts in the subjects concerned, whether engaged in teaching, research, or extension. The practice of grouping science experts, such as soil chemists, dairy bacteriologists, etc., with the technical departments rather than with their respective science departments to be discontinued.

(*c*) The work in home economics at the State college to be reorganized as a distinct division.

(*d*) Better facilities in increased appropriations to be devoted to the library at the State college.

(*e*) The teacher training work at the State college to be expanded, as stated in a previous chapter.

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 32

TEACHING AMERICAN IDEALS THROUGH LITERATURE

BY

HENRY NEUMANN
Ethical Culture School, New York

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, August 1, 1918.

SIR: The best expression of a people's ideals is to be found in their literature, and there is no better or more effective means of disseminating these ideals among the masses of the people than through the right use of the best of the literature in the schools and elsewhere. The great struggle in which we are now engaged for the maintenance of our American ideals of freedom and democracy among ourselves and for the possibility of their extension throughout the world makes this a most opportune time for setting forth these ideals in an orderly way and for calling to the attention of teachers and others who have the direction of the reading of large numbers of people the books in which they are most adequately expressed and suggesting methods of using them. For this purpose I recommend that the accompanying manuscript, prepared at my request by Dr. Henry Neumann, of the Ethical Culture School, New York, be published as a bulletin of the Bureau of Education.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The Honorable the SECRETARY OF THE INTERIOR.

TEACHING AMERICAN IDEALS THROUGH LITERATURE.

In learning to be citizens nothing can take the place of practice. Here, as elsewhere, the first and last essential is conduct.[1] But vitally important as practice is, it needs to be propelled and guided by ideals, by a deep and intelligent love of the high aims for which our country stands. The following pages are offered as a suggestion of one way to foster such ideals.

Properly directed, there can be no more serviceable vehicle than American literature. In the first place, the very existence of so rich a literary production as our own is itself a striking witness to the idealistic strain in the American make-up. There are times, to be sure, when idealism would naturally seem to be our last and least characterization. As Mr. Arthur J. Balfour put it on his visit to Washington, "Because America was commercial, it was easy to suppose that she was materialistic." But all who love America understandingly have known better. They think how liberally Americans have endowed schools and other philanthropies; how generously they have responded to appeals from all over the world for food, for medicine, for education, for every lofty and heroic service; how eagerly their sons have volunteered their lives to free Cuba, to save Belgium and France; how devotedly they have given themselves to make our cities more beautiful, our working conditions more wholesome, our common life more genuinely human. If idealism means to do honor to those nobilities and pieties of life which can not be bought and sold, to cherish visions of a nobler living for mankind, and to spend one's best efforts in pursuing those visions, then there is no country more deserving of the title than our own.

These worthier expressions of the American spirit reach far back in our history. To mention but one instance:

> Between 1630 and 1690 there were in New England as many graduates of Oxford and Cambridge as could be found in any population of similar size in the mother country. * * * There will always be something fine in the thought of that narrow seaboard fringe of faith in the classics, widening slowly as the wilderness gave way, making its road up the rivers, across the moun-

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[1] See *Moral Values in Secondary Education:* Bureau of Education, Bulletin 51, 1917. Government Printing Office, Washington, D. C.

tains, into the great interior basin, and after the Civil War finding an enduring home in the magnificent State universities of the West.[1]

The American people have never been content to live by bread alone. Note how long is the roll of writers whom they have honored. That very fact is a signal testimony. A people who cared little for ideal things would never prize the beauty requisite for literary honors. They would never treasure the names of Hawthorne and Poe. When Ralph Waldo Emerson returned to Concord, he found that his townsmen had rebuilt for him the house which he had lost by fire. On his way he passed under a triumphal arch of roses which they had erected. They paid him this tribute because his life had been spent in teaching "Hitch your wagon to a star" and "Do not leave the sky out of your landscape." By thus honoring a writer they were also telling something significant about themselves and the idealism of the American people. To bring home the existence of this basic tradition, all use should be made of an enthusiastic teaching of American literature.

A second reason for its unique serviceability is the fact that literature touches the feelings far more effectively than information in history and civics. It selects for its themes the hopes that a country cherishes most widely and most ardently, and it sets these forth in the appealing garb of beauty. As we shall see presently, no noble American aspiration has ever lacked voice to utter it in song or story. Is it political liberty, is it brotherhood, is it a plea for justice or a passion for a better world order? Somewhere, we may be sure, a poet has framed to music what thousands of his countrymen are thinking and what they see and feel more vividly once they have heard his words. For it is the mark of all good literature that it possesses this rare power to clarify and to strike home. Often a single mighty phrase will light up the dark places of the mind and burn its way to the depths where motive powers are generated. At no time do heart and brain better reinforce each other than when the appeal is uttered in the beauty of literary art.

As a preliminary to the particular study of the appeals made by our literature, there are a few considerations of method that suggest themselves.

1. A distinct course in American literature has certain advantages, but in the high school (for the grades the matter is beyond all question) it will be found more advantageous not to concentrate the work into a single year. Under special conditions such a course may be desirable,[2] but in the main it would seem wiser to include American literature each year as part of that year's work. Concentration

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[1] *The American Mind*, Perry, Bliss, p. 39.

[2] See Bureau of Education, Bulletin, 1917, No. 2, *Reorganization of English in Secondary Schools*, pp. 83, 84. Consult for lists of recommended readings.

below the college years is apt to defeat its own object. Since our problem is essentially one of winning a love for ideals, there is every danger that we shall fail if we harp too long on a single string. Young people of high-school age have a way, too well known, of shutting their ears to the strains which are cherished by their elders when that cherishing is urged upon them monotonously. Moreover, by distributing the material over several years we make a better provision for growth at the different stages. Children will read "Evangeline" with greater enjoyment in the seventh or eighth grades than in the years when they feel capable of harder work.

On the whole, therefore, it is much more desirable to provide some study of American literature each year. For those pupils who wish more intensive study it ought not to be difficult to arrange a special course in a literary club.

2. Ideals, we have seen, become moving forces only when they are genuinely loved. They can never be forced as information, perhaps, can sometimes be. Like everything else which depends upon feeling, ideals are conveyed chiefly by contact of mind with mind. Hence it is that the stimulating contact between teacher and pupil which Carlyle described as "thought kindling itself at the living fire of thought" is particularly the need in the teaching of literature. The instructor whose own blood does not stir as he reads—

> Still be ours the diet hard and the blanket on the ground.
> Pioneers, O pioneers!

had better leave Whitman's poem untaught.

Fortunately there is a characteristic of the teaching in American schools which lends itself with special readiness to the service of the literature course. This is the close and friendly relationship between class and teacher which observers have often noted as a mark of our schooling. Let us make the most of this fact at all times, but particularly when our aim is so notably to cultivate the appreciation of literature in the formative period of youth. The teacher need not say so in words, but in his attitude he ought to say even more clearly. "Here is something splendid for which I care a great deal; let us enjoy it together."

Perhaps the most useful method the teacher can employ is to read aloud. Just as the good statue needs to be seen, not described, and the good song to be sung, not recited, so the great poem or speech needs to be heard to convey the full message its author intended. Let the teacher do justice to his subject by reading aloud, if only the passages he cares for most. Let him read simply and sincerely and with out any hesitation about showing his enthusiasm. He will find that many of his pupils will of their own accord commit to memory what they have learned to love because it is loved by him.

3. In this connection we shall do well to remember, in these days of new pride in America, how important it is for our boys and girls to care for their country's tongue at its best. Good reading aloud will do much to foster such affection. The French make a point of teaching their children French ideals by special attention to beauty in their written and spoken discourse. We can profit by their example. If we had no other reason for wishing our pupils to take over into their own speech something of the grace which characterizes literary utterance, we should find it in the fact that there is a subtle connection between the idealisms of a country and the language in which these are voiced. Note how the words of the least cultivated persons are lifted above the commonplace and take on a simple beauty the moment they give expression to the best that is in them. The Gettysburg Address is our classic instance of how dignity of thought and of phrase reinforce each other. Let us do all we can—and by no means only in the neighborhoods of the foreign-born, but in the native districts just as much—to furnish the standards that will supplant the tendency to slipshod speech and seductive slang. Language is a manner; a fine usage betokens the greater respect. Not that it is necessary (fortunately it is impossible) that children should learn to talk like books. But it is eminently desirable that they should learn by example how beautiful a medium the tongue of their country can become. Even though their conversation and their letters may never sound like Irving's or Hawthorne's, it is at least worth while for them to learn by this method among others that democratic freedom need not connote cheapness and vulgarity.

4. How shall we proceed in the explicit teaching of the truths which our poem or story embodies? Some of our texts will require little if any of such explication; some will need much. In the latter case, particularly where there is a distinctly ethical conception to be developed, there is often great temptation to drive at the point directly by asking the class "What does this poem teach?" Such a method is more than likely to kill the interest. A better procedure would be to stimulate thought by a series of less direct and less awkward questions. For example, in teaching "The Vision of Sir Launfal" to a high-school class, some such questions as the following might be asked to bring out the truth that democracy respects the divinity in men:

Why did the leper refuse the coin? Why did Sir Launfal toss it in scorn? Why is it inaccurate to say that he gave "from a sense of duty"? What would a genuine sense of duty require? Why did the knight shirk this real duty? Can you mention any instances where people offer a substitute (i. e., toss a coin) instead of doing the harder thing?

What was Lowell's purpose in revealing the divinity of the beggar? Why did he make him not only a beggar but the victim of a loathsome disease? Go back to the line "Daily we Sinais climb and know it not"; what does the reference mean? Why was the knight at first unaware that he was face to face with the Supreme Splendor? Does this poem tell you anything about the democratic ideal? How does democracy express this honor to the sacredness in men? Read Lowell's poem "A Contrast" and the essay "Democracy" and compare the ideas with the one in this poem. Read also Emerson's poem "Music," Whittier's "Democracy," and Whitman's "Give me the splendid silent sun." Read and discuss "Exit Charity," in Zona Gale's *Neighborhood Stories.*

5. The texts available for our purpose are easy to get. Lists of poems, essays, speeches, stories are given in the syllabi prepared in most schools for the different grades. For junior and senior high school, special attention may be called to the recommendations in *The Reorganization of English in Secondary Schools*, Bureau of Education, Bulletin, 1917, No. 2.[1] Collections of American poetry are found in Stedman's *Anthology of American Poetry*, Page's *Chief American Poets*, Stevenson's *Poems of American Patriotism*, Wallington's *American History by American Poets*, Humphrey's *Poetic New World.* A collection of new hymns is published in *The Survey* for January 3, 1914.[2]

What conceptions should a study of American poetry and prose enforce?

(*a*) *First is the idea of a certain greatness latent in the commonest of persons.* Take for illustration Whittier's "Snowbound." This household was utterly undistinguished. It was no more than one of countless others of the same plain type. The family were very ordinary folk; yet who would say that "commonplace" is the last word to characterize them? For that which is merely commonplace one can feel but little respect. Is this our feeling for the father and the mother in this poem; or do we not rather gain from the reading a heightened regard for the multitudes of whom these folk are but a type?[3]

Our democracy, instead of setting up the state as something distinct from and superior to the people, says that it is just ordinary men and women who make the nation and organize the state as its instrument:

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[1] This may be procured from the Government Printing Office, Washington, for 20 cents.

[2] This may be procured from The Survey, 105 East Twenty-second street, New York, for 25 cents.

[3] A study of Whittier should lead the students back to one of his inspirations, *The Journal of John Woolman*, an illustration of the spiritual perceptions attained by an early American who was a tailor.

> I will have never a noble
> Or lineage counted great.
> Fishers and choppers and plowmen
> Shall constitute the state,

declares "The Boston Hymn." And in his essay, *Democracy*, James Russell Lowell aptly calls the democratic method "such an organization of society as will enable men to respect themselves and so to justify them in respecting others." Universal suffrage is one of the outward signs of this faith. Democracy proclaims that the grounds for such respect can be found in all.

(*b*) *America rates her children upon their own merits and not upon their birth.* The knight in Edwin Markham's poem, "The Cup of Pride," learns that what counts in the final judgment is not his ancestry but the man he makes of himself. The point is repeated often in our literature. Let the prince and the pauper in Mark Twain's story change clothes, and which is which? The theme is typically American. So it is in "Huckleberry Finn." Huck, the warm-hearted boy who scorns the conventional proprieties but is quick to do a kindly turn and as true as steel, is the son of a vagabond.

To-day this democratic principle of respect for merit bears with special significance upon the relations between our native stock and our foreign born. What hopes America has held forth to millions the world over! Victims of economic stress like the Italians, of political oppression like the Germans who came here in 1848, of religious persecution like the Russian Jews, have had special reason to call this the land of opportunity and to say with Bryant—

> There's freedom at thy gates and rest
> For earth's down-trodden and opprest,
> A shelter for the hunted head,
> For the starved laborer toil and bread.
> Power at thy bounds
> Stops and calls back his baffled hounds.

We should see that our pupils everywhere appreciate this important fact in our national life. Both in the foreign-born and the native communities we should encourage them to read the biographies and other writings of foreigners who found in America the chance to make lives for themselves and who have recorded their appreciation. Among such books the following are recommended: *The Making of an American*, *How the Other Half Lives*, *Out of Mulberry Street*, by Jacob Riis, a Dane who became a newspaper reporter and an important worker for social and civic betterment in New York; *A Far Journey*, *My Father's House*, by M. Rihbany, a Syrian who became a well-known New England clergyman; *The Promised Land*, *The Stranger within Our Gates*, by Mary Antin, a Russian Jewess who records her great debt to the American public school; *The Schoolmaster of a Great City*, by Angelo Patri, a New York public-school principal; *Reminiscences*, by Carl Schurz, a German revolutionist who escaped in 1848, became a general in our Civil War, Senator from Missouri, minister to Spain, and Secretary of the Interior; *From the Bottom Up*, by Alexander Irvine, an Irish laborer who became a clergyman and reformer; *Joseph Pulitzer*, by Alleyne Ireland, the biography of an Austrian who became proprietor of the New York World; *Michael Heilprin and His Sons*, by Gustav Pollak, the life of a Polish Jew and his sons who attained distinction as scientists; *Louis Agassiz, His Life and Correspondence*, by Elizabeth C. Agassiz, the life of a Swiss who became a famous teacher of science at Harvard; *Threading My Way*, by Robert Dale Owen, a Welshman who came to Indiana with his father to found a cooperative commonwealth and became a Congressman and an important worker for American education; *From Alien to Citizen; Introducing the American*, by Edward A. Steiner, an Austrian who became a patriotic religious teacher; *The Life and Times of Stephen Girard*, by John B. McMaster, the biography of a Frenchman of the eighteenth century who became a distinguished merchant and philanthropist in Philadelphia.

No other land has tried on so generous a scale as ours this hopeful experiment of making one country out of people so diverse. In none but a democracy can such a venture hope to succeed. The grounds of that confidence are well put by Henry Van Dyke in his poem, "The Builders":

And thou, My Country, write it on thy heart:
Thy sons are all who nobly take thy part.
Who dedicates his manhood at thy shrine,
Wherever born, is born a son of thine.

To be truly democratic we must not only respect those who are different from ourselves, but we should prize their very differences. We must do more than require the immigrant and his family to become law-abiding citizens; we must cordially welcome everything valuable which they have to offer to America. Useful as is their contribution of muscle in our mines, in our kitchens, on our farms and railroads and highways, still more to be valued are those special mental and spiritual gifts which are different from those of the native stock. For example, many of our foreign-born bring with them traditions of literature, of song, of folk dancing and other arts, traditions of reverence, of cooperative community enterprise—from all of which our country can learn much.

To reap the best results of these diversities we must overcome our false prides and unworthy antipathies; we must show a genuine desire to understand these differences appreciatively and to use them. The legend carried by one of the societies of the foreign-born in this year's Fourth of July parade, "America's best plus our best," suggests a far better aim than the flat uniformity which some of the native stock seem to prefer. To encourage the offering of these varied gifts is surely sound pedagogy. Every teacher knows that to foster devotion there is nothing better than to allow people a chance to do something valuable for the object of that devotion. If we set the pride of the immigrant at work to discover ways in which he can add the best in his cultural heritage to the best in America's, we shall be helping him and America better than if the giving is all onesided, whether through charity or through teaching him our language and institutions. Let us by all means promote this finer relation of interchange. Just because we are a diversified people, ours is a rare opportunity to set mankind a splendid example of the new type of society which the world so sorely needs, a society in which people of different gifts live with one another, not simply in peace, but in the friendly encouragement of one another's distinctive excellencies.

(*c*) *American literature sings the dignity of work.* To-day we have learned in a new fashion to look upon work as national service, a way of rendering one's unique and necessary help to his country and to mankind. That all honor is due to the workers has, however, long been a familiar theme of our writers. Whittier's "Songs of Labor" came from his desire—

To show
The unseen beauty hid life's common things below.

"I hear America singing," said Walt Whitman, and it is typical that when he imaged this ideal for his country the songs he heard were those of men and women engaged in the daily, commonplace labors:

The shoemaker singing as he sits at his bench,
  the hatter singing as he stands,
The delicious singing of the mother or of the young wife
  at work or of the girl sewing or washing.
Each singing what belongs to him or her and to none else.

As we shall see later on, writers have not been lacking to tell us that the lives of great masses of toilers are far from singing such songs as Whitman's contented toilers.[1]

Who has given to me this sweet,
And given my brother dust to eat?

asks William Vaughn Moody, one of many to voice the need of better opportunities. But before our young people read, as they are certain to do some day or other, the literature of social reconstruction, it is essential that they first learn why work is so entitled to respect.

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[1] See section *h*.

They will then understand better why changes are demanded. For those in later years who already incline to radical views it is especially necessary that they see our present modes of working-life at their best no less than at their worst. The true reformer, it has been well said, always appreciates the value of what he is trying to replace.

(*d*) *The American ideal sets great store by self-reliance.* Our tradition is eminently one of self-dependent, adventurous pioneering:

> We detachments steadily throwing,
> Down the edges, through the passes, up the mountains steep,
> Conquering, holding, daring, venturing as we go the unknown ways,
> Pioneers! O pioneers!
>
> We primeval forests felling,
> We the rivers stemming, vexing we and piercing deep the mines within,
> We the surface broad surveying, we the virgin soil upheaving,
> Pioneers! O pioneers!

In a recent address the Secretary of the Interior, Mr. Franklin K. Lane, pointed out the persistence of this tradition:

> Spirit—what is the American spirit? Is it love of adventure? Two years ago Congress authorized the construction of a railroad in Alaska—500 miles straight away from the sea to the circle. We needed a thousand men, and within 60 days thirty-three thousand had made petition that they might take the hazards of that new country—not idlers, the flotsam of the sea of civilization, but men of steady habit, employed already, but ready for a new adventure. There's something American about that.
>
> There is no sense in saying that the spirit has gone out of a people when we as a landed proprietor are selling 12,000,000 acres of desert every year to people who earn it by living on it and turning it into farms. A few weeks ago we opened a tract of land in northern Montana where the thermometer falls to 40° below zero sometimes. There were 1,200 farms to be sold, and there were 27,000 applicants. Out of the first 150 names drawn from the box, not one failed to accept his opportunity. We challenged him to go into the wilderness and make a home, and he took the challenge. There's something American about that.

Emerson is the most notable exponent of this temper on its spiritual side. In his well-known "Fable," when the mountain taunts the squirrel for inability to carry trees upon its back, the squirrel replies with the home thrust "Neither can you crack a nut." On a loftier plane Emerson bids the reader, "Trust thyself. Every heart vibrates to that iron string." No graduate of an American high school should be unacquainted with the essays "Self-Reliance" and "The American Scholar," or with the ringing words from the address "Literary Ethics":

> You will hear every day the maxims of a low prudence. You will hear that the first duty is to get land and money, place and name. What is this Truth you seek? what is this Beauty? men will ask with derision. If, nevertheless, God has called any of you to explore truth and beauty, be bold, be firm, be true. When you shall say: "As others do, so will I; I renounce, I am sorry for it, my early visions; I must eat the good of the land and let learning and romantic

expeditions go until a more convenient season," then dies the man in you; then once more perish the buds of art and poetry and science, as they have died already in a thousand thousand men. The hour of that choice is the crisis of your history.

(*e*) *America is good-natured, kindly, and fond of fun.* The combination is less accidental than it seems. There is a type of wit which is intellectually brilliant, but is intended to sting and to rankle. The type of humor prevalent in our country is of a different sort. When we think of the affection that goes out to our greatest humorist, we see the aptness in William Dean Howell's characterization of him as "the Lincoln of our literature." What attracts us in Mark Twain is not intellectual acuteness, but warmth of heart, a broad and deep human sympathy that makes a laugh with him a spiritual tonic. There is an important difference between the laugh which says, "How ridiculous these other people are," and the democratic sort which says, "What a funny thing human nature is, our own included!"

The feeling for this better kind of humor should receive every encouragement in the classroom. The day has passed when humor needs a plea in its defense. It is no longer necessary to say that fun has its great place in the making of a young life. The chief need is to rid the sense of humor of its coarser associations, to refine and sweeten it. The teacher can do much by showing how interrelated is the best humor with breadth and ardor of sympathy. The author of "Tom Sawyer" also wrote the "Personal Recollections of Joan of Arc" and was a sturdy champion of many an appeal for justice. His biography and his letters are well worth knowing.[1] They throw light on one reason why his humor is so winning.

(*f*) *A true democracy requires respect for differences.* People in various sections of our country are coming to know their fellow citizens of other sections better than heretofore. Under the unifying spirit of the national crisis old animosities are fast disappearing forever. But there is still need for something more, a positive and reciprocal appreciation of the southern type, for example, and of the New England, the eastern, and the western type. Here we shall find literature an incomparable help. Pupils in the North should know more than they do about the work of Poe and Lanier, of Cable and Harris, and Page and Allen, besides merely remembering that Patrick Henry, Washington, Jefferson, and Madison were Virginians. One of the finest studies of an American gentleman is "Robert E. Lee, American," by Gamaliel Bradford, a portrayal all the more deserving of our pupils' attention for being the appreciative work of a northerner.[2] Paul Hamilton Hayne's sonnet to

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[1] Mr. Albert B. Paine, his biographer, has also published "A Boy's Life of Mark Twain."

[2] Literature and history teachers, north and south, should read to their classes the letter written by Robert E. Lee, upon accepting the presidency of Washington College. See Trent's Southern Writers.

Henry Wadsworth Longfellow is an excellent tribute in the other direction. East and West meet in Mark Twain.

Joaquin Miller's Autobiography (in the Bear Edition of his poems) gives an excellent picture of life in the West. For understanding the hard life of the middle western farmer that has led to so many misunderstood and easily ridiculed radicalisms, Hamlin Garland's "Son of the Middle Border" is recommended, and, in his "Main Traveled Roads," the two stories "Up the Cooley" and "Under the Lion's Paw."

Religious differences present hardly any grave difficulties to-day; and the great majority of our people would vote that our traditional policy of keeping our public schools unsectarian has been the best. But everything we can do is worth trying to supplement this policy by fostering in all our citizens a positive appreciation of those whose faith is different from their own. The study of "Evangeline," for example, should direct attention to Longfellow's hearty admiration for a Catholic community. A descendant of the Puritans, he showed the best kind of democracy in portraying the life of a Catholic village with such fine feeling for its beauty. His translation of Dante, his sonnets "The Divina Commedia," his "Ladder of St. Augustine," etc., are similar expressions.

America will be the better for having her widely varying children not simply tolerate differences but respect them, with an eye ever open to divergent excellences. It is notable that children of Jewish parents, particularly from Russia, where persecution has been extreme, learn from the conduct of American teachers more, perhaps, than in any other way, how utterly un-Christian is the spirit of bigotry and prejudice. The Russian child who has heard from his father and mother, or seen for himself, as some have done, how Christians in the old country celebrated Christmas and Easter by massacring Jews can thank the American public school for teaching him something better about the religion he had such reason to fear. Instead of attempting to proselytize, the teacher can make "The Vision of Sir Launfal," for instance, the occasion to interpret Christianity in ways that no Jewish parents in America can find other than helpful. The study of The Merchant of Venice offers another such opportunity. The teacher who has read the commentaries of Verplanck and Hudson will wish his class to see how both the Christian characters and Shylock are debased by the spirit of persecution. Antonio, the gentleman, becomes much less the gentleman by his treatment of the Jew, while the latter is goaded by his injuries to inhuman revenge. Our country is of all places the land to prize the truth in Emerson's weighty saying that you can not degrade a fellow-being without degrading yourself, and that men are respectable only as they respect.

In all these matters of difference—racial, religious, sectional, or otherwise, every effort is worth making to forestall un-American prejudices. United by a single, common love for their country, and inspired by the unifying conviction that over here men and women are to be judged upon their merits and not upon their birth, our children will offer a richer and better contribution to American life when they have been helped to cultivate the spirit of appreciation of what is different.[1]

(*g*) *Democracy means obligation.* The quality of our collective life rises or falls with the level of the lives led by each.

For America is not the magic scenery
Washed by the sunrise and the sunset seas;
No; nor yet the prairies dark with herds,
Or land-lakes of the western grain; nor yet
Wonder cities white-towered, nor the peaks
Bursting with metals, nor the smoky mills;
America is you and you and I.

In the first stages of reaction against feudalism, it was natural that the emphasis in democracy should have been laid upon individual rights. The need for such an insistence has by no means utterly passed. But we have learned from the experiences of our history that the correlative of individual freedom should be an emphasis at least equal if not stronger upon duty. My rights always involve your duty to respect them; but we shall be better citizens if each of us shifts the accent to read, "Your rights are my duties." A study of such works as Washington's Farewell Address, Webster's Bunker Hill Oration, Lowell's Democracy, George William Curtis's The American Doctrine of Liberty, and The Public Duty of Educated Men, ex-President Taft's Four Aspects of Civic Duty, should lead to fruitful thinking upon this vital topic. So should the discussion of problems and changed viewpoints brought about by the great war. More than ever we shall need the quality which Webster lauded in Washington, "A spotlessness of motive, a steady submission to every public and private duty, which threw far into the shade the whole crowd of vulgar great." We are learning to-day to repeat more earnestly:

So nigh is grandeur to our dust,
  So near is God to man;
When Duty whispers low, "Thou must,"
  The youth replies "I can."

"Duty," said Robert E. Lee, "is the sublimest word in the English language."

No longer are we content with a conception of democracy that bids us simply refrain from invading the rights of our neighbors. We have learned that there is a common good in whose behalf we must do things more positive. As against the old watchword of "Every man for himself without interference" the new inspiring word of to-day is "Come together to serve."

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[1] See section b.

Bring all your fairest gifts to deck her shrine
Who lifts our lives above mine and thine.

The common duty comes first. Democracy means the opportunity to share that duty as voted by the people themselves. The citizen has a voice in deciding what shall constitute the collective burden, and he also has the duty, a duty for that very reason more urgent than in an autocracy, to promote the public good to the full extent of his power. Freedom is precious not so much because it permits the enjoyment of rights as because it offers us the chance to share like free men and women in the common burdens.[1]

(*h*) *The ideal of freedom requires changes in social arrangements as well as insistence upon personal duty.* This note is perhaps the one most insistently stressed in American literature of the present day. It distinguishes the poems of such a writer as Edwin Markham from those of an earlier day like Whittier's. It implies no weakening of our sense of personal responsibility to know that working conditions and other social mechanisms must be improved. Nay, it is in the very interests of a finer personality and a greater capacity to live out the duties of citizenship that we know it does not pay to let children toil in the factories, to overwork our women, to let great masses of our people grow up illiterate and unskilled, or to herd them in ugly, insanitary, vice-breeding slums. The freedom that is most worth while is, as we have said, freedom to do one's duties. The immigrant father who wishes to bring up his children to a worthy American manhood and womanhood is not free to do so as long as he is obliged to rear them amid physical and moral filth. The conditions under which he works, and those amid which he rests, must favor, not hinder, the performing of his full duty to his family and country.

As President Wilson put the case in his New Freedom, a higher standard of life is needed than that—

> men simply cast about to see that the day does not end disastrously with them * * *. Set the initiative of this great people absolutely free, so that the future of America will be greater than the past, * * * so that America will know as she advances from generation to generation that each brood of her sons is greater and more enlightened than that which preceded it, know that she is fulfilling the promise that she has made to mankind.

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[1] For further discussion of this point, see *Moral Values in Secondary Education*, Bureau of Education, Bulletin, 1917, No. 51, p. 12; also Bulletin 28, 1916, *The Social Studies in Secondary Education*.

> The meaning of liberty has deepened. But it has not ceased to be a fundamental necessity for the life of the soul. And the day is at hand when it shall be realized on this consecrated soil, a New Freedom, a liberty widened and deepened to match the broadened life of man in modern America, restoring to him in very truth the control of his Government, unfettering his energies, and warming the generous impulses of his heart, a process of release, emancipation, and inspiration, full of a breath of life as sweet and wholesome as the airs that filled the sails of the caravels of Columbus and gave the promise and boast of magnificent opportunity in which America dare not fail.

This raising of the quality of personal life in each and all is the thing of importance in the "new social conscience" that is astir in our country. The fight against political dishonesty and inefficiency, against the wasting of our natural resources, against the unfair drains upon the power of women, of children, of other workers unjustly treated, is a crusade in the interests of a new and more positive freedom, the freedom to live a useful, worthy, full-statured American life.

There is much about these problems that is disturbing; and as our public schooling must be free from political partisanship, they must be handled with all fairness. It is useless, however, to try to keep our pupils from discussing the problems of the day. The spirit of reconstruction is in the air. It has been quickened by the war. Our boys and girls now imbibe it everywhere, and they discuss its implications among themselves. The school should help them to make their discussions more intelligent and more fair. If ever we think their views unwarrantably radical, let us not be alarmed; experience will teach them wherein their ideas are extreme; but the experience of adult years is scarcely likely to kindle the zeal for progress which so animates the period of youth. This is notably the stage when ideals of disinterested service make a powerful appeal. The world would never have its reformers, it has been well said, if we were all born middle-aged. The visions of the eager lad of seventeen will be sobered by his contacts with life later on; but they will hardly be created by those contacts. Let youth dream its dreams of a nobler social order. Our country itself is young and forward-looking. Of it, too, may be said to-day what Wordsworth said of an earlier day of reconstruction:

> Bliss is it in that dawn to be alive,
> And to be young is very heaven.

All this noble unrest of mind and soul is increasingly mirrored in the American literature of the past 20 years. Let the literature teacher recommend the writings and biographies of American leaders of thought for a better shaping of the common life. Among such we would suggest the poems of Edwin Markham; Van Dyke's "Who Follow the Flag," and "The Builders"; Moody's "Gloucester Moors"; Peabody's "The Singing Man"; selections from Lanier's "Symphony"; Widdemer's "The Factories and Other Poems"; Jacob Riis's "How the Other Half Lives," and "Out of Mulberry Street"; Jane Addams's "Democracy and Social Ethics," and "Twenty Years at Hull House"; Lillian D. Wald's "The House on Henry Street"; Arthur T. Hadley's "Standards of Public Morality"; Edward D. Ross's "Sin and Society"; William D. Howell's "A Traveler from Altruria"; Booker T. Washington's "Up from Slavery," and "Working with the Hands"; Francis G. Peabody's "Education for Life" (the inspiring story of Gen. Armstrong and Hampton Institute); Henry George, jr.'s, "Life of Henry George"; Paul L. Ford's "Honorable Peter Stirling"; Frank Norris's "The Pit"; Winston Churchill's "Mr. Crewe's Career"; William H. Taft's "Four Aspects of Civic Duty"; Theodore Roosevelt's "American Ideals," and "The New Nationalism"; Woodrow Wilson's "The New Freedom"; Walter Weyl's "The New America"; Herbert Croley's "The Promise of American Life."

(*i*) *Our democracy will profit from understanding other countries.* We are outgrowing the habits of mind fostered by our earlier isolation. We are rapidly learning to think of our Nation as a member in a family of nations; and our land is going to be the greater for a new exchange between ourselves and the other members of it. Loving our own country first, we shall be more appreciative of what we owe to other peoples and of what we can learn from their example and friendly criticism.

Here the teaching of literature can be of marked service. It can correct the tendency to provincialism by showing, for example, the indebtedness of our writers to those of the mother country. Our literary speech has been molded by the English of the King James Bible; until our country produced its own literature it knew, besides the Bible and the Greek and Roman classics, only the literature of Great Britain. The debt should be remembered. For instance, Whittier's "Snowbound" might be compared with Burns's "Cotter's Saturday Night," and Lowell's "Dandelion" with the latter's "To a Mountain Daisy." Lowell's tribute to the plowman poet in his "Incident in a Railroad Car," and Whittier's in his poem, "Burns" (Holmes's and Longfellow's also), deserve to be noted. Where, if not in American schools, should "A Man's a Man for A' That" be committed to memory?

Edmund Burke's "Speech on Conciliation with the American Colonies" repays the careful study it receives in many high schools. It is good for our pupils to know the man himself, to admire him for his fight to drive out the rotten borough system, to abolish imprisonment for debt, to prevent oppression of the natives in India by colonial administrators (as they read in Macaulay's "Warren Hastings"), and especially for the generosity of mind that made him study the American Colonies in order to interpret them aright to his fellow statesmen. His speech will help our pupils to understand the American spirit in the light of one line of its ancestry. Studied in connection with the words of such English historians of our Revolution as Lecky and Trevelyan, it will enable American children to see that there were Englishmen who approved our action because it was in line with the English tradition of liberty. The Colonies were lost to Great Britain because the conduct of the Tory administration toward America was un-British. The devotion of Canada, Australia, New Zealand, and of South African Union to-day illustrates how well Great Britain took to heart the point in Edmund Burke's plea for the liberty which our pupils are apt to think exclusively American. His arguments against the use of force still hold good against the policy of conquest. The solid good sense in these arguments, as well as his eloquent reminder that the deepest ties among peoples, "links which light as air are strong as iron," are ties of respect and affection, should be as familiar as anything in our native literature.

A genuine pride in our own achievements need not suffer if we direct our pupils' attention in this way to what writers in other lands have done. Surely no American will care less for The Vision of Sir Launfal for being told how Victor Hugo taught much the same ideal in Les Miserables and The Hunchback of Notre Dame. It is only false pride that can not endure comparisons.

A true pride will be benefited by knowing what other people think about us. Just because America has so much to give mankind, we want to know how our gift can be improved. If our country is to become, as Daniel Webster said, "a vast and splendid monument upon which the world may gaze in admiration forever," surely she must school herself to improvement without ceasing. For this reason it is well to recommend to our boys and girls books on America by foreign observers. Bryce's American Commonwealth has justly won a place for itself. The introductory word breathes a specially admirable spirit. Letters from America, by Rupert Brooke, the poet who died in the Gallipoli campaign, criticizes some of our shortcomings, but always with kindly appreciation. So does the genial America through the Eyes of an Oriental Diplomat, by Mr. Wu Ting Fang. Other useful criticisms will be found in G. Lowes Dickinson's Appearances, and John G. Brook's collection As Others See Us.

(*j*) *Democracy rests upon excellence in character.* The greatest wealth of our country is the moral quality of her citizens.

The longer on this earth we live
  And weigh the various qualities of men,
Seeing how most are fugitive
  Or fitful gifts at best of now and then,

The more we feel the high, stern-featured beauty
Of plain devotedness to duty,
  Steadfast and still, nor paid with mortal praise,
But finding amplest recompense
For life's ungarlanded expense
  In work done squarely and unwasted days.

This tribute to Washington (in Lowell's Under the Old Elm) points a truth so simple and so obvious that youth may sometimes overlook its fundamental importance. Democracy is rooted in moral excellence. Character is at once its chief safeguard and its sublimest hope. There is need, as we have seen, for certain external reconstructions; there is need in a democracy for widespread common-sense and far-seeing intelligence and trained ability to work together. But these are only instruments. Their value lies in what they can contribute to the making of souls: for it is just this contribution to a nobler type of living that gives a nation its highest reason for being. The mission of America among the nations is to show what splendid types of human personality can be bred under the ideal of freedom. Like the Roman mother, she must exhibit as her jewels her sons and daughters.

Concern, then, for moral character is not to be regarded as something to be annexed to other features of citizenship and of school life as one might add a room or a wing to a building. It is to be the animating breath of all that the school undertakes to do for our country. The greatest wealth of the nation being moral personality, political freedom is precious as a way of increasing that wealth and elevating its quality.

Without tedious moralizing, literature lessons can bring this fact home. The more our pupils grow in the power of sustained reflection, the more we should seek to have them reflect upon the ethical principles that give grandeur to the ideal of freedom. Every admirable American life is a guaranty that our freedom is worth possessing. Every act of noble self-reliance, of integrity, of self-discipline, of bravery, of generosity, of self-denying, disinterested service, is one more step toward the truest of all freedoms, the liberation of what is best in mankind from its own unworthy entanglements. Our literature is rich in beautiful inspirations to this end. Let us make the most of them. In the service of American ideals, "thought kindling itself at the living fire of thought" has mighty tasks to push forward and magnificent resources to bring to light.

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 33

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SEPTEMBER, 1918

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MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS.

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CONTENTS.—Proceedings of associations—Educational history and biography—Current educational conditions—Education and the war—Educational theory and practice—Educational psychology; Child study—Educational tests and measurements—Special methods of instruction—Special subjects of curriculum—Rural education—Secondary education—Teachers: Training and professional status—Higher education—School administration—School management—School architecture—School hygiene and sanitation—Physical training—Play and playgrounds—Social aspects of education—Child welfare—Moral education—Religious education—Manual and vocational training—Vocational guidance—Agricultural education—Home economics—Commercial education—Professional education—Civic education—Immigrants and illiterates—Reeducation of war invalids—Education of women—Negro education—Exceptional children—Education extension—Libraries and reading—Bureau of Education: Recent publications—Periodicals represented in this record.

NOTE.

The record comprises a general survey in bibliographic form of current educational literature, domestic and foreign, received during the monthly period preceding the date of its publication.

This office can not supply the publications listed in this bulletin, other than those expressly designated as publications of the Bureau of Education. Books, pamphlets, and periodicals here mentioned may ordinarily be obtained from their respective publishers, either directly or through a dealer, or, in the case of an association publication, from the secretary of the issuing organization. Many of them are available for consultation in various public and institutional libraries.

Publications intended for inclusion in this record should be sent to the library of the Bureau of Education, Washington, D. C.

This number of the record immediately follows that for June, 1918, publication having been suspended during July and August.

PROCEEDINGS OF ASSOCIATIONS.

1006. **Association of colleges and secondary schools of the Southern states.** Proceedings of the twenty-third annual meeting, Atlanta, Ga., November 15–16, 1917. Athens, Ga., The McGregor co. [1918?] 89p. 8°. (Edward A. Bechtel, secretary, New Orleans, La.)

Contains: 1. W. A. Webb: Milton's views on education and their significance and value at the present time, p. 28–38. 2. E. A. Bechtel: The baccalaureate degree, p. 38–50. 3. W. D. Hooper: Elective courses and when election should begin, p. 50–55. 4. Edwin Greenlaw: Required work in literature for undergraduates, p. 56–64. 5. H. D. Campbell: An experimental development of a flexible A. B. degree, p. 65–69. 6. K. F. Smith: The degree of master of arts at Johns Hopkins, p. 69–76.

1007. **Connecticut state teachers' association.** Report of proceedings of midwinter meeting . . . Hartford, February 15–16, 1918. Hartford, State board of education, 1918. 57p. 8°. (Connecticut board of education. Connecticut bulletin 21, series 1917–18)

1008. **Indiana state teachers' association.** Proceedings and papers . . . October 31–November 3, 1917, Indianapolis. 414p. 8°. (C. O. Williams, secretary-treasurer, Richmond, Ind.)

Contains: 1. Mrs. Mary C. C. Bradford: The nation and the public school in the present crisis, p. 39–50. 2. C. A. Wagner: Education for all the people all the time, p. 60–71. 3. A. E. Winship: The artificial versus the natural in motivation, p. 71–78. 4. Mrs. Cora W. Stewart: Moonlight schools, p. 78–89. 5. T. H. Briggs: The war and secondary education, p. 95–106. 6. H. W. Foght: The rural teacher and the mastery of the course of study, p. 148–68. 7. Jane Griffith: Mental defectives in the schools, p. 171–79. 8. C. H. Judd: Adaptation of the elementary curriculum to vocational demands, p. 179–96.

1009. **Iowa state teachers' association.** Proceedings of the sixty-third annual session . . . held at Des Moines, Iowa, November 1–3. 1917. Des Moines [1918?] 218p. 8°. (Charles F. Pye, secretary, Des Moines, Iowa)

Contains: 1. The junior high school, p. 30–56. 2. Eva M. Fleming: Teachers for the schools of Iowa, p. 57–65. 3. A. M. Deyoe: Making an American, p. 66–77. 3. W. L. Harding: Schools and patriotism, p. 77–86. 4. H. H. Seerley: The spirit of the schools, p. 87–88. 5. F. A. Welch: Course in citizenship in public schools, p. 88–95. 6. P. W. Dykema: Community music, p. 98–104. 7. M. I. Flagg: Human interest in art teaching, p. 106–14. 8. Essie M. Heyle: The school lunch as a project in teaching cookery in the elementary schools, p. 119–24. 9. P. E. McClenahan: Cost of teaching in Iowa high schools, p. 127–31.

1010. **Louisiana teachers' association.** Journal of the proceedings and addresses of the twenty-seventh annual meeting held at Baton Rouge, La., April 4–6, 1918. Southern school work, 6: 485–551, June 1918.

Contains: 1. C. A. Ives: Effect of the world war on the supply of teachers in Louisiana, p. 504–7. 2. C. H. Bean: Professionalism among teachers, p. 507–9. 3. D. D. Nye: Education and music, p. 517–20, 522. 4. Dagny Sunne: Standardization in the schools of Louisiana, p. 529, 531–32. 5. A. M. La Meslee: French as taught in the camp, p. 537–40.

1011. **Maryland state teachers' association.** Fiftieth annual meeting . . . Baltimore, Md., November 26–28, 1917. 158 p. 8°. (Hugh W. Caldwell, secretary, Chesapeake City, Md.)

Contains: 1. P. P. Claxton: Address [Education and the war] p. 15–22. 2. T. H. Briggs: The war and secondary education. p. 26–34. 3. David Snedden: Wanted: a new principle of method, p. 34–36. 4. W. C. Ruediger: The spirit of the teaching corps, p. 37–46. 5. C. A. Smith: Americanism, p. 48–54. 6. H. L. Smith: The American teacher and the war, p. 54–57. 7. J. A. Nydegger: Rural schools vs. national health, p. 75–81. 8. Ee M. Williamson: The supervisor's part in the professional growth of teachers, p. 83–90. 9. O. M. Fogle: Some real project teaching, p. 94–99. 10. J. H. Apple: How may the relation between the State and its schools and colleges be raised to a higher plane? p. 100–16. 11. Lula J. Townsend: The value of an inventory to the composition teacher, p. 118–22; Discussion, p. 122–23. 12. G. M. Gaither: Manual training, p. 137–43.

1012. **Minnesota educational association.** Journal of proceedings and addresses of the fifty-fifth annual meeting held at Minneapolis, Minn., October 31–November 3, 1917. Minneapolis, Published by the Association, 1917. 192 p. 8°. (E. D. Pennell, secretary, East High School, Minneapolis, Minn.)

Contains: 1. Henry Clark: The dissatisfied teacher, p. 34–39. 2. F. G. Blair: Frankenstein and modern education, p. 40–47. 3. T. E. Finegan: What service shall the public school render, p. 48–53. 4. F. A. Parsons: The function of art in public education, p. 54–59. 5. T. E. Finegan: New York's experience in recent organization of its state educational department, p. 73–78; Discussion, p. 78–81. 6 Maren Michelet: Libraries as a help to language studies, p. 115–19. 7. S. H. Clark: What the high schools should do in presenting the position of the United States in the Great war, p. 132–39. 8. William Noyes: The junior high school and industrial education, p. 149–54. 9. P. W. Dykema: Significant tendencies in public school music to-day, p. 162–68. 10. S. A. Challman: Hygienic conditions in the public schools of Minnesota, p. 169–73. 11. C. H. Keene: The relation of physical welfare to national efficiency, p. 173–78.

3. **National education association. Department of superintendence.** Atlantic City meeting, February 25–March 2, 1918. Journal of the National education association, 2: 649–744, May 1918.

Contains: 1. Centraliing tendencies in educational administration—A. Limitations of state control in education [by] Payson Smith, p. 666–69.—B. The county as a unit for local administration [by] A. S. Cook, p. 669–73.—C. The township as a unit for local administration [by] R. B. Teitrick, p. 673–77.—D. How a state department may stimulate local initiative and increase efficiency [by] G. D. Strayer, p. 677–80; Discussion, p. 680–83. 2. Opportunity and leadership in American education—A. The place of the state supported and managed institution [by] B. I. Wheeler, p. 684–87.—B. The place of the educational institution for women [by] Kathryn S. McLean, p. 687–90.—C. The place of the educational foundation [by] Clyde Furst, p. 691–95.—D. The view of the entire situation from the outside [by] D. C. Seitz, p. 695–96. 3. Report of the committee on economy of time in elementary education, p. 696–702. 4. W. H. Kilpatrick: The problem-project attack in organization, subject-matter, and teacher, p. 704–7. 5. C. N. Kendall: School practice as affected by the reports of the committee on economy of time, p. 707–9. 6. Report of commission on administrative legislation, p. 711–24. 7. The report of committee on cooperation of boards of education, p. 725–28. 8. National responsibility for education of the colored people—A. The status of negro education [by] Kelly Miller, p. 731–34.—B. The nation's responsibility to the South for negro education [by] W. T. B. Williams, p. 734–38.—C. The nation's responsibility to itself for negro education and its constitutional power to render aid thereto [by] Isaac Fisher, p. 738–42; Discussion, p. 742–44. 9. F. I. Cooper: Standardization of schoolhouse planning and construction, p. 745–52. 10. H. N. MacCracken: Work and scope of the junior Red cross, p. 753–56. 11. Abby P. Leland: Scouting education for girls, p. 756–60. 12. F. L. Keeler: The new responsibilities and opportunities which the war situation has brought to the state department and the schools, p. 760–65; Discussion, p. 765–66. 13. M. P. Shawkey: How shall we conduct the thrift campaign so as to cause it to attain its maximum effectiveness, p. 766–69. 14. J. H. Binford: Standardizing the small country school, p. 772–75. 15. M. S. H. Unger: The county as a unit of organization, p. 775–79. 16. Mrs. T. W. Hayes: Rural school as a social center, p. 779–82. 17. E. C. Hartwell: Financing the public schools, p. 782–84. 18. J. D. Shoop: Why the cost of public education is constantly increasing, p. 784–86. 19. G. D. Strayer: Educating the public to the financial needs of the school, p. 786–89. 20. F. W. Ballou: Efficient finance for the city school system, p. 790–93; Discussion, p. 793–95. 21. Leadership as found today in instruction in interpreting the curriculum—I. In the superintendent [by] Z. C. Thornburg, p. 795–97; II. In principals and supervisors [by] R. O. Stoops, p. 800–803. 22. Ernest Horn: How leadership in making new adjustments in education must be provided, p. 805–8. 23. Milton Bennion: Direct instruction in citizenship in the high school, p. 809–12. 24. Laura M. Smith: Thrift in relation to public schools, p. 815–18. 25. War problems—A. Economy of time—a twelve months' school, divided into four quarters [by] F. E. Palmer, p. 818–22; B. Conservation of resources—school savings banks and thrift education [by] Arvie Eldred, p. 822–26; C. Increast food production—home gardening [by] E. C. Sherman, p. 826–29; D. A practical program of patriotic instruction [by] F. G. Blair, p. 829–32. 26. Grace Abbott: Enforcement of the United States child labor law, p. 834–38. 27. J. W. Davis: The need of a continuing census of children of school age, p. 842–45. 28. E. N. Clopper: Causes of absence from rural schools, p. 845–48. 29. Physical welfare work with school children in war time—A. The vital necessity of physical training for the country boy and girl [by] D. A. Sargent, p. 854–57; B. Principles underlying minimum essentials of exercises, [by] W. A. Stecher, p. 858–60.

4. **New Jersey state teachers' association.** Annual report and proceedings of the 63d annual meeting . . . held in Atlantic City, N. J., December 27–29, 1917. Trenton, N. J., MacCrellish & Quigley co., 1918. 212 p. 8°. (H. J. Neal, secretary, Phillipsburg, N. J.)

Contains: 1. Etta V. Leighton: The boy and the book, p. 38–43. 2. David Snedden: Real vs. sham efficiency, p. 43–54. 3. David Snedden: The high school of 1925, p. 55–60. 4. A. D. Dean: Our schools in war and after, p. 61–65; Discussion [by] W. A. O'Leary, p. 65–67. 5. T. D. Wood: The philosophy of physical training, p. 67–75. 6. Z. E. Scott: The spirit of physical training, p. 75–80. 7. A. N. Chandler: More money for schools and pensions, p. 80–83. 8. Report of committee on educational progress, p. 84–88.

1015. **South Dakota educational association.** Proceedings of the thirty-fifth annual session . . . held at Sioux Falls, November 26–28, 1917. Aberdeen, S. D. [1918?] 287 p. 8°. (A. H. Seymour, secretary, Aberdeen, S. D.)

Contains: 1. W. E. Johnson: Making education definite, p. 24–35. 2. L. D. Coffman: Democracy and education, p. 36–44. 3. C. H. Lugg: State superintendent's annual address [The American public school], p. 45–50. 4. G. M. Whipple: How to attend and never forget, p, 51–59. 5. S. A. Courtis: Address [on educational tests] p. 60–65. 6. L. D. Coffman: The value of educational measurements, p. 80–86. 7. Edward Von Ruschen: The public schools as related to the making of criminals, p. 106–9. 8. W. D. Schermerhorn: The grant-in-aid system of education in British India, with suggestions as to practical bearing on American problems, p. 113–15. 9. G. M. Whipple: The problem of the feebleminded, p. 138–46. 10. L. A. Fell: Finding the superintendent, p. 150–55. 11. J. C. Tjaden: The seating problem, p. 189–92. 12. E. L. Hunt: Literary appreciation in high school, p. 235–40.

EDUCATIONAL HISTORY AND BIOGRAPHY.

1016. **Ballou, Frank W.** [Address] on the retirement of Superintendent Franklin B. Dyer. School and society, 8: 135–39, August 3, 1918.

Read before the teachers' organization of the city at a luncheon given at the Hotel Somerset, Boston, on June 22, 1918.

A brief review of the educational work of Franklin B. Dyer, giving particular attention to his administrative work in Boston, Mass.

1017. **Benoist, Antoine.** L'oeuvre de Liard. Revue pédagogique, 72: 157–93, March 1918.

CONTENTS.—I. Les années d'apprentissage.—II. Liard à la direction de l'enseignement supérieur.—III. Liard vice-recteur.

1018. **Bloss, W. Escott.** The rise of the great public schools. School guardian, 43: 98–101, 122–24, March, April 1918.

By the same author: Grammar schools and classical teaching—a historical retrospect. School guardian, 43: 202–5, July 1918.

1019. The election of William H. Maxwell as city superintendent of schools emeritus, the city of New York. New York, Printed by the boys of the Vocational school, Fifth avenue and 138th street, 1918. 76 p. 8°.

1020. **Good, Harry G.** Benjamin Rush and his services to American education. Berne, Ind., Witness press [1918] 283 p. 12°.

Bibliography: p. [259]–275.

1021. **Jackson, George L.** The privilege of education; a history of its extentension. Boston, R. G. Badger [1918] 143 p. 12°.

CURRENT EDUCATIONAL CONDITIONS.

UNITED STATES.

1022. **Boodin, J. E.** Education for democracy. School and society, 7: 724–31, June 22, 1918.

Speaks of the lessons we can learn from Germany in training our children for democracy. Says that German autocracy has used every content subject of the curriculum to impress upon the youth its ideals of power and expansion. We should teach the various subjects from the point of view of democracy.

1023. **Bradford, Mary C.** Building the new civilization. School and society, 8: 70–72, July 20, 1918.

Address of the president of the National education association, Pittsburgh, July 1, 1918.

1024. **Dewey, Henry B.** Problems of the educational publisher. American school board journal, 57: 35–36, 83, July 1918.

Address delivered at the Department of educational publications of the National education association, February 28, 1918.

25. **Finney, Ross L.** Education and the reconstruction. School and society, 8: 11–17, July 6, 1918.

Says, in conclusion, that as soon as possible we should develop some adequate agency for the leadership of educational reconstruction. Suggests that the National education association take up this problem with a view to providing such an agency in connection with the Bureau of education.

26. Humanism and democracy. Unpopular review, 10: 114–26, July–September 1918.

A criticism of educational conditions in the United States.

27. **Judd, Charles Hubbard.** Democracy and American schools. Chicago, Ill., The University of Chicago press [1918] 15 p. 8°. (The University of Chicago war papers, no. 7)

28. ——— The evolution of a democratic school system. Boston, New York [etc.] Houghton Mifflin company [1918] ix, 119 p. 12°. (Riverside educational monographs, ed. by H. Suzzallo)

An effort to bring out explicitly some of the justifications for the reorganizations of the American school which are now under way. Gives particular approval to the junior high school movement. Traces the illogical break between our elementary and secondary schools to borrowing from the Prussian eight-year common school system. Recommends production of textbooks specially adapted to junior high school use.

29. **MacCracken, John H.** A new era in education. Independent, 95: 193–94, 203, August 10, 1918.

Describes the efforts to coordinate the demands of Government upon education. Crystallization of educational opinion in favor of a National department of education.

30. **Massachusetts. Board of education.** Report on investigation regarding establishing schools in county jails and houses of correction. January 1918. Boston, Wright & Potter printing co., state printers, 1918. 45 p. 8°.

31. **Monroe, Paul.** Further consideration of Prussia and our schools. School and society, 7: 691–94, June 15, 1918.

Refutes the arguments that appeared in an article on Prussia and our schools in a recent issue of the New Republic, claiming that the great educational movement of the third and fourth decades of the nineteenth century was the fruit of Prussian autocracy, etc.

Professor Charles H. Judd answers Professor Monroe in School and society for June, p. 751–54, under the title "Shall we continue to imitate Prussia?' Professor Monroe replies under the title Shall we continue to advocate reforms by false arguments? in School and society, September 7, p. 290–94.

32. **National education association.** A national program for education. A statement issued by the National education association commission on the emergency in education and the program for readjustment during and after the war. Washington, 1918. 27 p. 8°. (Commission series, no. 1)

Contents: I. The nature of the present crisis faced by the public schools of the United States.—II. The preparation, supply, and compensation of teachers.—III. The importance and needs of rural education.—IV. A complete program of physical and health education.—V. Problems of immigrant education and adult illiteracy.—VI. Compulsory continuation schools.—VII. The creation of a National department of education and the extension of national cooperation with the states in strengthening the public schools.

33. **Rochester, Minn.** Board of education. Rochester public schools, Rochester, Minnesota. Report of the Board of education 1912–1918. [Rochester, Minn., Schmidt printing co., 1918] 208 p. front., illus., plates, diagrs. 8°.

Constitutes a survey of the Rochester schools

1034. **Roscoe, Frank.** An Englishman at the N. E. A. Nation, 107: 62–63, July 20, 1918.

Writer, a British representative at the conference, says: "Freshness of view and alertness of mind were the distinguishing features of the convention." Gives a résumé of the discussions.

1035. **Russell, James Earl.** Education for democracy. Teachers college record, 19: 219–28, May 1918.

Address before the Alumni association of Teachers college, February 22, 1918.

1036. **St. Louis, Mo. School survey.** Survey of the St. Louis public schools. St. Louis, Mo., Board of education, 1917. 7 v. 12°.

Director of the survey: Charles H. Judd.

CONTENTS.—Vol. I.—1. General statement, by C. H. Judd; 2. Administration and organization, by H. C. Morrison; 3. Appointment of teachers and teacher training, by C. H. Judd. Vol. II.—1. Non-promotions and two-quarter promotions in the elementary schools, by C. H. Judd; 2. Observations of elementary school instruction, by G. A. Mirick; 3. The curriculum situation, by J. F. Bobbitt; 4. Reading, by W. S. Gray; 5. Arithmetic, by C. H. Judd; 6. Handwriting, by F. N. Freeman; 7. Special schools, by W. F. Dearborn. Vol. III.—High schools, by A. B. Meredith. Vol. IV.—Finances, by H. O. Rugg. Vol. V.—1. Construction of school buildings, by W. R. McCornack; 2. Hygiene of school buildings, by F. B. Dresslar; 3. Use of elementary and high school class rooms, by S. O. Hartwell. Vol. VI.—1. Music, by J. B. Cragun; 2. Drawing, by F. H. Daniels; 3. Physical education, by G. W. Ehler. Vol. VII.—1. Child accounting and attendance, by H. C. Morrison; 2. Medical inspection, by E. A. Peterson.

Vol. VI not yet published.

1037. **St. Paul, Minn. Survey commission.** Report of a survey of the school system of Saint Paul, Minnesota. [St. Paul, 1917] 962 p. illus., fold. plates, tables. 8°.

Authorized by the City council of St. Paul, Minnesota, February 16, 1917.

Survey commission: George D. Strayer, chairman; Lotus D. Coffman, C. A. Prosser.

1038. **Schoolmasters' association of New York and vicinity.** Unpatriotic teaching in public schools. The facts concerning the transfer and dismissal of some teachers of the DeWitt Clinton high school. New York City, American defense society, inc., 1918. 39 p. 12°.

A report prepared by a committee of the Schoolmasters' association of New York and vicinity.

1039. Toward the new education. The case against autocracy in our public schools. (Being a reply to a pamphlet issued by the Schoolmasters' association of New York and vicinity and The American defense society, entitled, "Unpatriotic teaching in public schools.") [New York] Teachers' union of the City of New York [1918] 164 p. 8°.

1040. **Vincent, George E.** The Rockefeller foundation. A review of its war work, public health activities, and medical education projects in 1917. New York, 1918. 47 p. illus. 8°.

1041. **West, Andrew F.** The immortal conflict. School and society, 8: 31–35, July 13, 1918.

Delivered at the general meeting of the National education association in Pittsburgh, July 4, 1918.

Says the school's part in the immortal conflict is the struggle against ignorance. Discusses briefly formal discipline, election of studies, vocational education, and exclusive nationalism in culture.

FOREIGN COUNTRIES.

1042. **Besch, Émile.** Le lycée et l'école primaire. Revue universitaire, 27: 324–39, May 1918.

Discusses the relations between elementary and secondary education in France.

1043. **Foght, Harold W.** A survey of education in the province of Saskatchewan, Canada. A report to the government of the province of Saskatchewan . . . Regina, J. W. Reid, King's printer, 1918. 183 p. 8°.

1044. **Kahn, Ida.** An appeal to American returned students. Millard's review of the far east (Shanghai, China), 5: 131–34, June 22, 1918.

Advice to Chinese students educated in the United States.

1045. Letting down the English schools. School and society, 7: 740–42, June 28, 1918.

From the London Nation.

Shows the war's effect on education in England.

1046. **McConaughy, James L.** Germany's educational failure. School review, 26: 416–22, June 1918.

Criticizes the German school system as undemocratic. It fosters the caste system. It is a state-centralized system that is used for a most pernicious end.

1047. **Pécaut, Félix.** La guerre et les pédagogues. Revue pédagogique, 72: 315–22, May 1918.

The article concludes that the experience of the war has not discredited the French methods of education. The war has found France in progress, and no necessity is so far apparent for changing the directive principles of her pedagogy.

1048. **Peck, Harvey W.** Hun and humanist. Sewanee review, 26: 358–64, July 1918.

Says: "The emphasis placed by the Germans on detailed facts to the exclusion of generalizations and the cultivation of judgment . . . has contributed toward their inability to know either themselves or others." Describes German scholarship.

1049. **Roscoe, Frank.** Educational reconstruction in England. School and society, 8: 164–66, August 10, 1918.

Summary of an address of the British representative given at the Pittsburgh meeting of the National education association.

Child neglect in England—why a bill is wanted and what the bill proposes.

1050. ———. The English education bill. Nation, 107: 90–91, July 27, 1918.

An interesting review of educational conditions in England and a summary of the provisions of the education bill.

1051. **Wells, H. G.** The education of Joan and Peter. New republic, vol. 15–16, nos. 192–201, July 6–September 7, 1918, 10 instalments.

A comment in the form of a novel on modern education in England.

EDUCATION AND THE WAR.

1052. **Beesley, Thomas Quinn.** The problems ahead. Catholic educational review, 16: 32–40, June 1918.

The schools and the war. Discusses such problems as teachers' salaries and the shortage of teachers, the education of immigrants, training in citizenship, etc.

1053. **Brown, Charles A.** Address of the president of the Alabama educational association, Birmingham meeting, March 28–30, 1918. Educational exchange, 33: 14–18, May 1918.

How the schools can help win the war.

1054. **Hill, Clyde M.** *and* **Avery, John M.** The war book. [Montpelier] State of Vermont, State board of education, 1918. 106 p. 8°.

1055. **Johnson, C. V.** School administration and the war. School index, 4: 308–9, June 7, 1918.

Paper read before the Cincinnati schoolmasters club, May 11, 1918.

European mistakes, juvenile delinquency, farm work for children, the situation in this country, etc.

1056. **Kolbe, Parke R.** War work of the United States Bureau of education. School and society, 7: 606–9, May 25, 1918.

The stimulation of patriotic endeavor, the furtherance of international relations, and the study of war conditions in American schools.

1057. **Ling, Ping.** The public schools and food conservation. **Pedagogical seminary, 25: 191–210, June 1918.**

Shows how food conservation can be taught to advantage in connection with geography, current events, English, arithmetic, physiology and hygiene, and home economics, and tells how the schools can extend their influence to the homes through canning work in the community, food demonstrations, etc.

1058. ———. School children and food production. **Pedagogical seminary, 25: 163–90, June 1918.**

After giving typical examples of what some states have done in school and home gardens, the writer takes up the subject of school children and farm work, discussing such topics as age-limit, scholarship requirements, demand for farm labor, training children for farm work, educational value of farm work, etc.

1059. **Marty, Henri.** L'éducateur aux armées. **Éducation, 10: 25–33, March 1918.**

Writer says that the educator in military service has acquired notions of order, authority, and responsibility which should be applied in his profession after the war, for the improvement of the French schools.

1060. **Pasadena, Cal. High school.** The war and America. **Part I–III, February–April 1918.** Sacramento, California state printing office, 1918. 3v. 12°. (California. State board of education. **Bulletin 24, pt I–III)**

CONTENTS.—I. Introd. war citizenship lessons.—II. Problems of finance, food and clothing.—III. Government and schools in war time.

1061. **Rogers, Roswell W.** Our high schools in war time. **Mississippi educational advance, 8:** [8–11] June 1918.

How the high schools may be used in war time.

1062. **Sisk, Horace.** War work—an important link in the educative process. Training school quarterly, 5: 141–43, September 1918.

What the war has done to vitalize the course of study.

1063. **Strayer, George D.** Plan to meet emergency in schools due to the war. Creation of National department of education discussed by head of Association—Better pay for teachers advocated. **New York Times,** July 21, 1918.

Reprinted.

1064. ———. The war savings campaign in the public schools. **American review** of reviews, 58: 169–71, August 1918.

Says that one of the great gains that is to come to America on account of the war is the development of a more thrifty people.

1065. Teaching, vol. 4, no. 1, April 1918. (The school and the war)

Contains: 1. P. P. Claxton: Education during the war, p. 6–12. 2. W. D. Ross: Education in war time—and after, p. 12–13. 3. C. F. Scott: The school and the war, p. 14–15. 4. Arthur Capper: Schools the foundation for democracy, p. 15–16. 5. Emerson Carey: The effect of the war on schools, p. 16–17. 6. Practical suggestions for war service work in schools, p. 17–45. 7. Teachers' directory for patriotic service, p. 45–47. 8. War activities in Kansas schools, p. 48–54.

1066. **Wright, Robert H.** The place of public education in the present world crisis. Training school quarterly, 5: 136–40, September 1918.

Commencement address delivered at the Eastern Carolina teachers training school.

EDUCATIONAL THEORY AND PRACTICE.

1067. **Armani, Tarquinio.** Le basi della cultura in una questione di riforma. Rivista pedagogica, 11: 289–305, May–June 1918.

1068. **Caldwell, Otis W.** An experimental school. **Education, 38: 694–705,** May 1918.

Work of the Lincoln school described.

1069. **Charters, W. W.** The inadequacy of principles of teaching. Educational administration and supervision, 4: 215–21, April 1918.

1070. **Ciancio, Francesca.** Sul concetto di cultura. Rivista pedagogica, 11: 306–21, May–June 1918.

1071. **Cooper, Lane.** Two views of education. Sewanee review, 26: 333–50, July 1918.

Contrasts the views of John Calvin and Jean Jacques Rousseau—philosophical, religious, and educational. Has something to say on the teaching of the classics.

1072. **Donnelly, Francis P.** Lack of unity in modern education. America, 19: 437–39, August 10, 1918.

Shows the evils of excessive specialization in school work and advocates the centering of attention on expression as the chief purpose of language study from the early grades up to the first years of college, subordinating the rest of the course to the art of writing and speaking.

1073. **Eliot, Charles W.** The modern school. Education, 38: 659–67, May 1918.

Work and ideals of the Lincoln school described.

1074. **Grabo, Carl H.** Education for democratic leadership. American journal of sociology, 23: 763–78, May 1918.

Says that the aim of education should be "to strengthen by the study of present institutions, political and economic, the idea that these may increasingly be altered in conformity to better ideals as we become intelligent and unselfish."

1075. **Judd, Charles Hubbard.** Introduction to the scientific study of education. Boston, New York [etc.] Ginn and company [1918] xii, 333 p. 12°.

1076. **Krebs, Henry C.** Being a good teacher. Philadelphia, New York [etc.] Hinds, Hayden & Eldredge, inc. [1918] 153 p. 16°.

1077. **Shorey, Paul.** "The modern school." Education, 38: 668–84, May 1918.

A reply to Dr. Eliot's article in same number of Education.

EDUCATIONAL PSYCHOLOGY; CHILD STUDY.

1078. **Drummond, Margaret.** The dawn of mind; an introduction to child psychology. London, E. Arnold, 1918. 179 p. front. 12°.

1079. **Hug-Hellmuth, H. von.** A study of the mental life of the child. Psychoanalytic review, 5: 291–322, July 1918.

Continued from preceding number. Discusses reasoning of the child.

1080. **Jastrow, Joseph.** The psychology of conviction, a study of beliefs and attitudes. Boston and New York, Houghton Mifflin company, 1918. 387 p. 8°.

The book asks how far our convictions, which are born of emotion and nurtured by convention, can be modified or controlled by reason. Among the chapters are the following: The democratic suspicion of education, p. 218–45; The feminine mind, p. 280–325.

1081. **King, Irving.** Further data on the magnitude and rate of changes in adolescence. Educational review, 56: 19–27, June 1918.

A study based on data obtained from 386 college students mostly juniors and seniors, 303 women and 83 men.

1082. **Knowlson, Thomas Sharper.** Originality, a popular study of the creative mind. London, T. W. Laurie, ltd., 1917. 304 p. 8°.

Author says that in order to inquire into the nature of originality we must study the nature of genius, which is mind working on its own higher planes, and thus has a natural history as well as natural laws of operation. It is possible to study the whole of the phenomena of originality by means of the accepted truths of psychology, biology, physical geography, and sociology. The book includes chapters on Defective home training, False education, and the Lack of a science of reading.

1083. **Kornhauser, Arthur W.** The economic standing of parents and the intelligence of their children. Journal of educational psychology, 9 : 159–64, March 1918.

"One thousand school children were grouped into three classes according to their advancement in school, and the economic status of their parents was deduced from the possession or lack of a telephone. The correlation between school advancement and possession of a telephone was 0.61."

1084. **Morcerf, Robert.** Education by association. Journal of the Association of collegiate alumnae, 11 : 631–37, June 1918.

The development of a normal boy who did not go to school till he had passed his sixteenth birthday.

1085. **Terman, Lewis M.** *and* **Wagner, Dorothy.** Intelligence quotients of 68 children in a California orphanage. Journal of delinquency, 3 : 115–21, May 1918.

1086. **Thomson, Margaret.** The adolescent and the schools. English journal, 7 : 383–87, June 1918.

1087. **Waddle, Charles W.** Introduction to child psychology. Boston, New York [etc] Houghton Mifflin company [1918] 317 p. 12°.

Bibliography at end of most of the chapters.

EDUCATIONAL TESTS AND MEASUREMENTS.

1088. **Anderson, C. J.** The use of the Woody scale for diagnostic purposes. Elementary school journal, 18 : 770–81, June 1918.

Results of a study in which the Woody scale in division was used, both in rating the division work of pupils and in ascertaining what kind of errors pupils make in division. Illustrated with graphs.

1089. **Bagster-Collins, E. W.** A brief study showing the relation between the vocabulary and the treatment of the annotated reading test. Modern language journal, 2 : 341–51, May 1918.

1090. **Bell, J. Carleton.** A test in first year chemistry. Journal of educational psychology, 9 : 199–209, April 1918.

A preliminary account of this study was read before the Chemistry section of the Central association of teachers of school science and mathematics at Columbus, Ohio, December 1, 1917, and appears in the May number of School science and mathematics.

1091. **Bliss, Don C.** Methods and standards for local school surveys; with introduction by George Drayton Strayer. Boston, New York [etc.] D. C. Heath & co. [1918] xxiv, 264 p. 12°.

1092. ———. Standard tests and a basal method of teaching reading. Elementary school journal, 18 : 795–801, June 1918.

1093. **Bovet, Pierre.** Le rendement de l'école—pourquoi nous ne sommes pas encore à même de le mesurer. Éducation, 10 : 13–24, March 1918.

By the director of the Institut J.-J. Rousseau at Geneva, the "school of educational sciences." A paper introductory to a description of the work of the school.

1094. **Cotton, Carl.** The results of some classroom measurements. Elementary school journal, 18 : 802–6, June 1918.

Work of the various grades in Portsmouth, N. H., schools, from the fourth to the eighth inclusive, was measured in the four fundamentals of arithmetic, spelling, writing, and composition and reading during November and December, 1917, and again in the spring of 1918.

1095. **Courtis, S. A.** The measurement of high school mathematics. School science and mathematics, 18: 507–26, June 1918.

1096. **Gray, C. Truman.** A comparison of two types of learning by means of a substitution. Journal of educational psychology, 9: 143–58, March 1918.

"Gray's substitution test is constructed according to a rational plan. The question considered is what differences in learning are noticeable in subjects who know the plan and work in accordance with it, as compared with those who are unaware of the existence of a plan and form their associations in a purely mechanical fashion."

1097. **Ide, Gladys G.** The Witmer formboard and cylinders as tests for children two to six years of age. Psychological clinic, 12: 65–88, May 15, 1918.

Writer says: "Failing as clinical material for children of five years, it still possesses value as didactic material where time does not limit the observation."

1098. **Kerr, James.** Standard measurements for school children. School hygiene (London) 9: 4–15, April 1918.

Address before Medical officers of schools associations, London, England. Statistics and graphs.

1099. **Lewis, E. O.** The Binet and point-scale methods of testing intelligence. Journal of experimental pedagogy and training college record (London) 4: 198–202, March 5, 1918.

1100. **New York (City) Dept. of education. Division of reference and research.** Report on some measurements in spelling in schools of the borough of Richmond, City of New York. [New York, 1918] 88 p. 8°. (Publication no. 16)

1101. **O'Hern, Joseph P.** Practical application of standard tests in spelling, languages, and arithmetic. Elementary school journal, 18: 662–79, May 1918.

Tests made in Rochester, N. Y. Comparison with Cleveland and Grand Rapids schools. Writer says the more the standard tests are used the more he is convinced that these tests are useful, not only for the purposes of diagnosis and comparison, but also for the purpose of locating new pupils in their right grade.

1102. **Pintner, Rudolf.** The mental survey. New York, London, D. Appleton and company, 1918. 116 p. 8°.

1103. **Pintner, Rudolf** *and* **Toops, Herbert A.** A drawing completion test. Journal of applied psychology, 2: 164–73, June 1918.

1104. ———. A revised directions test. Journal of educational psychology, 9: 123–42, March 1918.

"Two directions tests, easy and hard, were devised by Woodworth and Wells in 1911, but as yet no forms have been published. The authors gave these tests to more than a thousand children, and present the results in this paper. From their experience with these tests they derive a revised directions test with a wider range of difficulty."

SPECIAL METHODS OF INSTRUCTION.

1105. **Cross, Allen** *and* **Statler, Nellie Margaret.** Story-telling for upper grade teachers. Chicago, New York, Row, Peterson and company [1918] 299 p. 12°.

Bibliography: p. 265–296.

1106. **Woodhull, John F.** The project method in the teaching of science. School and society, 8: 41–44, July 13, 1918.

Abstract of an address delivered before the Schoolmasters' conference held at the University of Pennsylvania, April 11, 1918.

SPECIAL SUBJECTS OF CURRICULUM.

READING.

1107. **Judd, Charles Hubbard,** *and others.* Reading: its nature and development. Chicago, Ill., The University of Chicago press [1918] 192 p. tables, diagrs. 8°. ([Supplementary educational monographs, v. 10, no. 4, July 1918])

With the cooperation of William Scott Gray, Katherine McLaughlin, Clarence Truman Gray, Clara Schmitt, Adam Raymond Gilliland.

1108. **Spaulding, Frank E.** *and* **Bryce, Catherine T.** Learning to read. A manual for teachers using the Aldine readers. New York, Newson & company [1918] 243 p. 12°.

At head of title: Revised edition, 1918.

LITERATURE.

1109. **Cestre, Charles.** A French method of teaching literary criticism. English journal, 7: 355–63, June 1918.

Discusses the exercise known in French universities as "commentary upon a text," which is "a practical means of making actually living and vital the literary knowledge communicated to the students in the courses *ex cathedra,* and of training the students to personal and original thought."

ENGLISH AND COMPOSITION.

1110. **Condon, Anna A.** A series of motivated language lessons introducing description as a new form of composition. Elementary school journal, 18: 782–94, June 1918.

Gives lessons, and examples of some of the best compositions from a group of children in the Rogers school, Stamford, Conn.

1111. **Hinckley, Theodore B.** Drama and the English course. School review, 26: 423–37, June 1918.

Value of the drama in high school course; it stimulates class discussion. Work in the University high school, University of Chicago, where a new course in drama has been formulated.

1112. **MacMinn, George R.** Pains and palliatives in teaching English composition. Sewanee review, 26: 301–12, July 1918.

A satirical article dealing with teachers of English, their status and methods of work.

1113. **Parkinson, Laura D.** Variety in assignments for written composition. English journal, 7: 371–76, June 1918.

Subjects drawn from commercial life are of engrossing interest to high-school students, says the writer.

MODERN LANGUAGES.

1114. **New England modern language association.** Bulletin, vol. 8, May 1918. 86 p. 8°. (Bertha Vogel, Secretary, South Boston high school, Boston, Mass.)

Contains: 1. C. A. Downer: High-pressure methods for teaching French to soldiers, p. 3–15. 2. J. D. M. Ford: Spanish as a subject for entrance to college, p. 16–18. 3. F. B. Luquiens: Spanish as a college substitute for French or German, p. 18–22. 4. Lilian L. Stroebe: The summer schools as a war-time substitute for study abroad, p. 23–42.

1115. **Davis, C. O.** The probable future of the study of German in the public schools of Michigan. School and society, 7: 744–50, June 22, 1918.

Results of a questionnaire sent to the high schools of Michigan to determine the decline in the study of German during 1917–1918, the nationality of the teachers of German, the reasons for the opposition to its study, etc.

16. **Harrington, John Walker.** A survey of the country's action against the German language. Publishers' weekly, 94: 189–91, July 27, 1918.
Reprinted from New York Times.

17. **Haxo, Henry.** The status of foreign language teaching in Montana. Intermountain educator, 13: 3–10, June 1918.
The status of German, French, Spanish, and Latin in the high schools of Montana. This article was written before the promulgation by the Montana state council of defense prohibiting the study of the German language in the public schools.

18. **Highet, Mary E.** Conservation of the German language as a war measure. [Elmira college, Elmira, N. Y., 1918] 7 p. 8°.

19. **Lenz, Frank B.** Teaching English to Chinese students. Educational review, 113: 659–64, June 1918.
An exposition of the direct, practical, natural way of learning any language.

20. **Peers, F. Allison.** Accuracy in French free composition. Journal of experimental pedagogy and training college record (London) 4: 167–75, March 5, 1918.
Advocates the direct method of teaching modern languages. To be concluded.

21. **" Polites,"** *pseud.* The Magna Charta of modern studies. Contemporary review, 113: 659–64, June 1918.
Criticizes the ultra-specialization of modern education. Says there are everywhere signs of a reaction in favor of synthesis and redintegration. Lays emphasis on the study of modern languages, and reviews the Report of the Committee to enquire into the position of modern languages in the educational system of Great Britain.

22. **Super, Charles W.** A substitute for German. Ohio educational monthly, 67: 221–25, June 1918.
Advocates that no foreign language should be taught in the elementary grades and that in the high school only Latin be taught.

23. **Swiggett, Glen Levin.** Why we should study Russian: the nation's need. School and society, 7: 640–44, June 1, 1918.
Urges the study of Russian for commercial purposes.

24. **Wilkins, Lawrence A.** Spanish in the high schools; a handbook of methods with special reference to the junior high schools. Chicago, New York [etc.] B. H. Sanborn & co., 1918. 265 p. 12°.
This book is believed to apply equally well to the junior high school, named in the title, to the present four-year high school, and to the new senior high school. The author is head of the department of Spanish, DeWitt Clinton high school, New York city, and in charge of modern languages in the New York city high schools.

25. ———. Wastage in modern language instruction. Bulletin of high points in the teaching of modern languages in the high schools of New York city, 2: 1–6, April 1918.

26. ———. Why teach German in the high schools? Bulletin of high points in the teaching of modern languages in the high schools of New York city, 2: 1–7, May 1918.
Gives the reasons that have been advanced for studying the German language in the high school and shows that there is no further need for German in the schools.

ANCIENT LANGUAGES.

27. **Agard, Walter R.** A new drive for Greek. Sewanee review, 26: 351–57, July 1918.
A plea for the study of Greek, also presents a plan for interesting students in Greek culture through literary masterpieces in translation, etc.

1128. **Crouch, Eugene M.** The problem of Latin in secondary schools. Educator-journal, 18: 578–83, July 1918.

Does not approve of Latin in the high schools except for the exceptional student who has a talent for language.

1129. **McCrea, Nelson G.** Notes on the results of the college entrance examinations in Latin. Classical journal, 13: 658–69, June 1918.

Paper read at the 13th annual meeting of the Classical association of New England, Windsor, Conn., March 28, 1918.

1130. **Painter, George S.** Problem of language study. Classical journal, 13: 629–43, June 1918.

Says that if we are to have "a profound and genuine scholarship, we can never afford to turn away from the classics as the basal implements of science and learning."

HISTORY.

1131. **Buell, Bertha G.** History in the primary grades—why and what. American schoolmaster, 11: 242–51, June 15, 1918.

1132. **Simpson, Mabel E.** Supervised study in American history. New York, The Macmillan company, 1918. 278 p. 12°.

Bibliography: p. 269–271.

1133. **Williams, Mary Wilhelmine.** Outline for the incidental study of Latin-American history in secondary schools. History teacher's magazine, 9: 335–37, June 1918.

GEOGRAPHY.

1134. Journal of geography, vol. 16, no. 10, June 1918. (Geographical directory and hand book)

Contains: 1. A list of 120 selected articles on geography in schools and colleges, p. 361–67. 2. Modern text books and reference books, p. 368–74. 3. Supplementary geographical material for use in the grades, p. 374–76. 4. Reports of committees and individual investigators, p. 377–78. 5. Geographical readers in series, p. 378–80. 6. List of articles on the teaching of geography in educational magazines, p. 381–84. 7. Summer courses in geography, p. 403–6.

MATHEMATICS.

1135. **Association of mathematics teachers of the Middle states and Maryland.** Report of the committee on elementary-school mathematics. Mathematics teacher, 10: 198–204, June 1918.

Harrison E. Webb, chairman.

1136. **Moore, Ernest C.** Does the study of mathematics train the mind specifically or universally? A reply to a reply. School and society, 7: 754–64, June 29, 1918.

A reply to an article by Robert E. Moritz in School and society for April 27, 1918.

1137. **Rugg, Harold Ordway** *and* **Clark, John Roscoe.** Scientific method in the reconstruction of ninth-grade mathematics; a complete report of the investigation of the Illinois committee on standardization of ninth-grade mathematics, 1913–1918. Chicago, Ill., The University of Chicago press [1918] 189 p. tables (1 fold.) diagr. 8°. (Supplementary educational monographs, pub. in conjunction with the School review and the Elementary school journal. vol. II, no. 1. . . . whole no. 7, April 1918.)

Reviewed by W. B. Owen in the School review, 26: 451–55, June 1918.

1138. **Stone, John C.** The teaching of arithmetic. Chicago, New York [etc.] B. H. Sanborn & co. [1918] 262 p. 12°.

A discussion of the aims and purposes of a course in arithmetic and of the methods of presenting each arithmetical topic which belongs in the elementary schools.

SCIENCE.

1139. **Central association of science and mathematics teachers.** Proceedings of the seventeenth meeting . . . held at the Ohio state university, Columbus, November 30 and December 1, 1917. 168 p. 8°. (A. W. Cavanaugh, secretary, Lewis institute, Chicago, Ill.)

Contains: 1. L. H. Bailey: The science element in education, p. 7–11. 2. F. T. Jones: Report of committee on science in the high school of tomorrow, p. 11–15. 3. M. M. Wells: The relation of ecology to high school biology, p. 39–46. 4. F. D. Barber: The reorganization of high school science, p. 59–74. 5. J. P. Goode: A unit course in economic geography for the high school, p. 90–97. 6. G. D. Hubbard: Reasons for giving geography a greater place in the high schools, p. 98–111. 7. S. A. Courtis: The measurement of high school mathematics, p. 129–48. 8. J. A. Culler: Science in the war, p. 157–64.

1140. **Howe, C. M.** What eighty teachers think as to the aims and subject matter of general science. General science quarterly, 2: 445–58, May 1918.

Results of a questionnaire sent to 160 teachers of general science.

1141. **Johnson, E. H.** The newer demands on physics and physics teachers. Science, n. s. 48: 101–8, August 2, 1918.

Discusses the scientific trend of the times.

1142. **Meister, Morris.** Science work in the Speyer school. General science quarterly, 2: 429–45, May 1918.

Paper read at the Science round table, Teachers college alumni conferences of 1918.

The project method of science teaching and other activities in the teaching of sciences in the Speyer school, New York.

1143. **Nichols, M. Louise.** A remedy for the congestion of subject matter in general science. General science quarterly, 2: 458–68, May 1918.

1144. **Ruch, G. M.** General science in the University high school, Eugene, Oregon. School review, 26: 393–400, June 1918.

Outlines a course in science. Seeks to accomplish three things: "(1) To make the work strictly experimental by using the laboratory approach to all topics. This is then supplemented by a study of text-book materials. (2) To use the inductive method os widely as possible. (3) To incorporate some of the desirable features of the problem method of instruction."

1145. **Trafton, Gilbert H.** The teaching of science in the elementary school. Boston, New York [etc.] Houghton Mifflin company [1918] 293 p. 12°.

Bibliography: p. [285]–288.

1146. **Van Cleave, H. J.** The influence of high school biological courses upon grades of university freshmen in zoology. School science and mathematics, 18: 483–91, June 1918.

Concludes that the study of or omission of zoology in high school has little influence upon the kind of work done by students in this same subject in college or university classes.

1147. **Wiley, William H.** An experimental study of methods in teaching high school chemistry. Journal of educational psychology, 9: 181–98, April 1918.

A study to determine the best of three methods of teaching chemistry—the text-book recitation method, the so-called lecture method, and the laboratory method.

1148. **Woodhull, John F.** The teaching of science. New York, The Macmillan company, 1918. 249 p. 12°.

MUSIC.

1149. **Music teachers' national association.** Papers and proceedings . . . at its thirty-ninth annual meeting, New Orleans. December 27–29, 1917. Hartford, Conn., Pub. by the Association, 1918. 248 p. 8°. (William Benbow, secretary, 825 Elmwood avenue, Buffalo, N. Y.)

Contains: 1. J. L. Erb: Problems of the music teacher, p. 9–18. 2. K. W. Gehrkens: Report of the committee on public school music, p. 82–87. 3. C. H. Farnsworth: Why teach appreciation? p. 88–94. 4. F. H. Ripley: How to promote musical appreciation without technical work, p. 95–104. 5. Max Schoen: The preparation of the rural school teacher for work in music appreciation, p. 105–8. 6. Mary L. Regal: Music appreciation in the high school, p. 109–15. 7. R. G. McCutchan: Community music and the Council of defense, p. 116–24. 8. Max Schoen: The significance of music in the rural school and community to the rural life problem and to the musical progress of the United States, p. 125–32. 9. F. C. Bornschein: The juvenile orchestra, p. 162–69. 10. J. L. Erb: What the music teacher can do to help win the war, p. 195–98. 11. C. B. Cady: Standardization: a protest, p. 202–208. 12. C. H. Farnsworth: The middle ground in standardization, p. 209–12.

1150. **Knapp, Ida C.** Musical activities with little children. Kindergarten and first grade, 3: 223–30, June 1918.

1151. **Morgan, Mae S.** The value of teaching music in the public schools. Nebraska teacher, 20: 459–60, 462, 464, June 1918.

1152. **Taylor, David C.** The melodic method in school music. A manual for teachers and supervisors. New York, The Macmillan company, 1918. 171 p. 12°.

ELOCUTION.

1153. **Forncrook, Elva M.** A fundamental course in speech training. Quarterly journal of speech education, 4: 271–89, May 1918.

Urges the creation of laboratories for speech experimentation. Outlines a course of speech training for college freshmen.

1154. **Wilds, Elmer H.** Speech education in normal schools. Quarterly journal of speech education, 4: 304–10, May 1918.

Says there is a great lack of standardization, not only in respect to number of courses, but even in the nature of the courses.

RURAL EDUCATION.

1155. **Conference on rural education.** State normal school, Worcester, Mass., March 15, 1918. [Papers] Education, 38: 733–91, June 1918.

Contains: 1. W. B. Aspinwall: Making citizenship training effective, 733–39. 2. A. B. Hart: The lesson of the obligation of citizenship, p. 740–54. 3. L. S. Mills: Purposes, sources and methods in the teaching of citizenship, p. 755–66. 4. H. G. Brown: The part of normal schools in the training of the new citizenship, p. 767–71. 5. A. G. Webster: Foreign versus American ideals of citizenship, p. 772–74. 6. T. M. Osborne: The man, the citizen and the community, p. 775–91.

1156. The Banker-farmer, vol. 5, no. 8, July 1918. (Rural education number)

Contains: 1. J. L. McBrien: Give 7,000,000 children a chance. Consolidate by federal and state aid in a ten-year nation-wide drive, p. 2–3, 5. 2. J. C. Muerman: What consolidation means. Better rural education is a war-and after the war-measure, p. 6–7. 3. Lee Driver: Consolidation in Indiana. What the consolidated school has meant to Randolph county, p. 10–11.

1157. Educational administration and supervision, vol. 4, no. 4, April 1918. (Rural school number)

Contains: 1. L. W. Rapeer: Rural school consolidation and national consolidation, p. 179–88. 2. E. C. Higbie: Rural education in a middle border county, p. 189–98. 3. C. L. Phelps: A study of 292 rural schools of California with reference to age-grade distribution and other educational conditions, p. 199–208. 4. A. G. Crane: Training principals for rural consolidated schools in North Dakota, p. 209–14.

1158. **Holton, Edwin L.** *and* **Strickland, V. L. A score card for rural schools. Manhattan, Kans., The College, 1918. 14 p. 8°. (Kansas state agricultural college bulletin, vol. 2, no. 9, June 15, 1918)**

1159. **Leighton, Etta V.** Re-Americanizing the rural school. American school, 4: 141-42, May 1918.

1160. **Magers, S. D.** Improvement in rural school organization. American schoolmaster, 11: 206-12, May 15, 1918.

Reprinted from the Quill, published by the Northern state normal school, Marquette, Michigan.

Deals particularly with the consolidated schools.

1161. **Rapeer, Louis W.** School administration and the consolidated rural school. American education, 21: 492-96, June 1918.

1162. **Wilson, G. M.** Rural education in Denmark. Midland schools, 62: 282-84, May 1918.

The elementary school, the folk high school, and the agricultural high schools.

SECONDARY EDUCATION.

1163. **Davis, C. O.** Accrediting secondary schools. American school board journal, 57: 27-29, 69, August 1918.

An address delivered in Chicago, March 16, 1918, before the North central academic association.

The advantages of accrediting, the disadvantages of group inspection, the routine of accrediting, reaccrediting by inspection, two present day accrediting agencies, etc.

1164. **Guenot, H.** Mémoire et culture. Revue universitaire, 27: 247-58, April 1918.

Denies the assertions made by various writers in the Grande revue that current secondary education appeals too much to memory, that its programs are overloaded, and that it fails in its object, which should be to learn how to learn.

1165. **MacLaren, Susanna M.** The justification of the junior high school. American schoolmaster, 11: 267-72, June 15, 1918.

Gives a list of the advantages which have been found to come from the junior high schools.

1166. **Parker, Samuel Chester.** Exercises for "Methods of teaching in high schools." A problem-solving method in a social science. Boston, New York [etc.] Ginn and company [1918] 261 p. illus. 12°.

1167. **Proctor, William M.** Union versus single district high schools. A comparison of the high school systems of Washington, Oregon, and California. Educational administration and supervision, 4: 146-54, March 1918.

TEACHERS: TRAINING AND PROFESSIONAL STATUS.

1168. **Brown, J. C.** State normal schools and the war. School and society, 7: 694-99, June 15, 1918.

Read before the National council of normal school presidents at Atlantic City, February, 1918.

The data given relate to (1) Changes in enrolment in the normal schools within the last year and the causes of these changes, (2) The scarcity of teachers, causes and remedies, and (3) Changes that have been made or are soon to be made in normal-school courses because of the war.

1169. The Carnegie foundation for the advancement of teaching. School and society, 7: 710-14, June 15, 1918.

Concluding part of "A statement to the teachers in the associated colleges and universities" on the new plan of pensioning teachers.

1170. **Curtis, Henry S.** Pedagogy versus matrimony. School and society, 8: 79-82, July 20, 1918.

Advocates the married woman as a teacher.

1171. **Davidson, Percy E.** University training for school supervision: a suggested program, with a partial report of opinion and some implications. Educational administration and supervision, 4: 227–34, April 1918.

Communicated to the annual meeting of the Society of college teachers of education, Atlantic City, February 25, 1918, at the invitation of the chairman.

1172. **Doolittle, A. A.** The measure of the teacher's work. Bulletin of the High school teachers' association of the District of Columbia, 11: 6–13, May 1918.

Report of the committee on school administration, showing the number of teaching periods, number of pupils, number of pupil periods, routine duties of the teachers, etc.

1173. **Downey, Helen M.** Old and young teachers. Pedagogical seminary, 25: 117–40, June 1918.

Gives the results of a questionnaire, showing that age in disposition is what counts for the teacher. Says that "Just so long as he retains certain dispositional qualities, the older teacher is the superior of the young teacher, by virtue of his wider experience and greater knowledge, which latter, however, become as sounding brass if he have not the former."

1174. **Furst, Clyde** *and* **Kandel, J. L.** Pensions for public school teachers. A report for the committee on salaries, pensions and tenure, of the National education association. 1918. 77 p. 8°. (Carnegie foundation for the advancement of teaching. Bulletin number twelve, 1918)

Advance proof subject to revision.

Brief bibliography: p. 75–77.

1175. **Guie, Enola B.** Purposes and welfare of the teachers. Pennsylvania school journal, 66: 517–20, May 1918.

Teaching as a profession, its purposes and conditions making for efficiency.

1176. **Harris, T. H.** Necessary support of public schools. Southern school work, 6: 391–95, April 1918.

The question of teachers' salaries in Louisiana and a plan for increasing salaries and thereby retaining teachers in the schools.

1177. **Kandel, I. L.** The war and teachers' salaries, England and Wales. School and society, 7: 773–76, June 29, 1918.

1178. **Kennedy, Joseph.** The profession of teaching. Quarterly journal of the University of North Dakota, 8: 365–67, July 1918.

Discusses the characteristics of a profession and compares teaching with the other professions.

1179. **Merriman, Eugene D.** Evaluating teaching service. Educator-journal, 18: 521–24, June 1918.

Advocates four methods of making criticism effective (1) Suggestion to individual teachers, (2) Conferences with groups of teachers, (3) Illustrative teaching, and (4) The use of standard measurements. Says that these four methods will secure the most effective results for the supervisor.

1180. **New Jersey. Bureau of state research.** Teachers' retirement systems in New Jersey. Their fallacies and evolution. New Jersey state research, 5: no. 5, supp. p. 1–48, February 1918. (Consecutive no. 10)

Introduction and Part I.—Chap. I. Establishment of retirement fund and its fallacies.—Chap. II. Failures of the "one per cent" fund.—Chap. III. Compulsory clause and the confusion of 1906.—Chap. IV. Period 1907–1917.—Chap. V. The state pension and its effect on the fund.—Appendices.

Part II will be published as consecutive no. 12.

1181. **Ogden, R. M.** The training course for psychological examiners at Cornell university. Journal of applied psychology, 2: 179–85, June 1918.

1182. **O'Shea, M. V.** An open letter relating to the training of teachers. Wisconsin journal of education, 50: 126–31, May 1918.

Discussed by Elmer H. Wilds in the Wisconsin journal of education for June, pages 155–60, under the title "The place of the normal school in the training of teachers."

Ritter, Elmer L. Rating of teachers in Indiana. Elementary school journal, 18: 740–56, June 1918.

Study based on a questionnaire sent out during July, 1916, to all supervisors, in Indiana, who give success grades; data gathered personally by the writer, etc. Says that among 1,752 teachers, "the grade teachers have the lowest median success grade, the special teachers next, the high school teachers third, and the kindergarten teachers highest."

The salaries of teachers and the cost of living. School and society, 7: 622–30, 655–60, May 25, June 1, 1918.

Shows what has been done in a number of cities toward raising the salaries of teachers.

Scientific measurements and the unmeasurable. Porto Rico school review, 2: 14–20, June 1918.

Measuring the efficiency of teachers.

Smith, Walter R. Our present educational crisis. Kansas teacher, 7: 7–9, June–July 1918.

Discusses the danger of lowering the personnel of the teaching body, resulting from the shortage of teachers and poor salaries.

Van Hise, Charles R. Outline of statement in regard to three and four year courses in normal schools. Wisconsin journal of education, 50: 161–68, June 1918.

Says in conclusion that the proposed plan of extending the normal school courses to four years means a greatly increased cost of the normal school system. Still more important, the proposed plan involves the abandonment of the sound educational policy which has hitherto been followed.

Webb, Hanor A. The typical teaching conditions of the faculties of southern normal schools. Elementary school journal, 18: 652–61, May 1918.

Study based on data obtained in 1916 from 15 state normal schools in the South. Illustrated with graphs.

Wilson, G. M. Instruction for teachers of agriculture under the Smith-Hughes vocational education law. School and society, 7: 520–23, May 4, 1918.

An address delivered before the Agricultural section of the National society for the promotion of industrial education, Philadelphia, February 21, 1918.

HIGHER EDUCATION.

Association of American colleges bulletin, vol. 4, no. 4, May, 1918. 24 p. 8°.

The War department's plan of military training for colleges, The emergency council of education, "Rapprochement intellectuel" between France and the United States, College women and the war, Educational activities in national army camps, The National research camps.

Association of American universities. Journal of proceedings and addresses of the nineteenth annual conference, held at the State university of Iowa, November 9–10, 1917. 106 p. 8°. (Herman V. Ames, secretary, University of Pennsylvania, Philadelphia, Pa.)

Contains: 1. John Dewey: The modern trend toward vocational education in its effect upon the professional and non-professional studies of the university, p. 27–32; Discussion, p. 32–35. 2. Discussion of "The advantages and disadvantages of the organization of the university year into four quarters, or of a continuous session throughout the year," p. 35–48. 3. E. R. Cumings: What provisions should be employed to enlist in behalf of scholarship the interests and ambitions of the ablest students? p. 50–63; Discussion, p. 63–68. 4. Outside professional engagements by members of professional faculties—From the point of view of the medical school, by T. C. Janeway, p. 72–80; From the point of view of the law school, by H. M. Bates, p. 80–87; From the point of view of the university in general, by C. L. Cory, p. 87–94; Discussion, p. 94–98.

1192. **Association of urban universities.** Third annual meeting at New York City, November, 1917. Report on field work. 1917–1918. 108 p. 8°. (Frederick B. Robinson, secretary, College of the City of New York, New York, N. Y.)

A complete report of the Committee on field work and an account of the third annual meeting.

1193. **Art publication society, St. Louis, Mo.** Statistical department. College music credits statistics. 1918. 11 p. 12°.

Gives a list of the colleges giving credit for music.

1194. **Ball, W. W. Rouse.** Cambridge papers. London, Macmillan and co., limited, 1918. 326 p. 8°.

History of Cambridge university, England.

1195. **Bee, Helen E.** A belated college course: its possibilities. Journal of education, 87: 591–93, May 30, 1918.

Shows the main advantages to be gained from a belated college course.

1196. **Capen, Samuel P.** The status of the land-grant college. Educational review, 56: 1–11, June 1918.

Status as outlined in reports of surveys made by the U. S. Bureau of education. Among other recommendations urges "the concentration of all senior college and graduate work in engineering, except agricultural and industrial engineering, at the state university and the development of only junior college courses in engineering branches, exceptions being made of agricultural and indusdustrial engineering again, at the land-grant college."

1197. **Carpenter, William H.** Higher education in Great Britain. Educational review, 56: 59–65, June 1918.

A review of G. E. MacLean's bulletin on Studies in higher education in England and Scotland, etc., published by the U. S. Bureau of education. Describes it as "an admirably written account of educational conditions in their historical evolution, of their tendencies and directions, and of their significance in the intellectual life of the nation."

1198. **Cornell university faculty.** Committee on the alumni inquiry regarding the recognition of scholarship. A movement for greater recognition of scholarship. Engineering education, 8: 422–43, May 1918.

Report of the committee.

1199. **Dawson, Percy M.** University ideals and their limitations. Science, n. s., 47: 547–56, June 7, 1918.

1200. **Hollister, R. D. T.** Common faults in college orations. Quarterly journal of speech education, 4: 311–23, May 1918.

1201. **Kane, Thomas Franklin.** The installation address of the president of the University of North Dakota. School and society, 8: 121–31, August 3, 1918.

Address delivered at Grand Forks, N. D., June 19, 1918.

Aims and ideals of a state university with particular reference to the University of North Dakota.

1202. **Lodge, *Sir* Oliver.** University development and a new degree. Nineteenth century, 84: 87–96, July 1918.

Higher degrees in English universities discussed. A plea for a new degree for research work in science.

1203. **McVey, Frank L.** The spirit of the university. School and society, 7: 721–24, June 22, 1918.

Synopsis of the installation address of President Frank L. McVey, University of Kentucky, June 4, 1918.

1204. **Neilson, William Allan.** The inaugural address of the President of Smith college. School and society, 8: 61–68, July 20, 1918.

Discusses principally the under-graduate and the curriculum.

Also in Smith alumnae quarterly, 9: 281–91, July 1918.

1205. **Pond, R. S.** Personal distribution of grades at the University of Georgia, and a comparison of this distribution with that of some other universities and colleges. [Athens, Ga., The University, 1918] 11 p. 1 fold. pl., tables. 8°. (Bulletin of the University of Georgia, vol. XVIII, no. 3a, March 1918)

1206. **Rine, Victor.** Harvard lights and shadows; college sketches in war times. Boston, Gorham press, 1918. 103 p. front., pl. 12°.

1207. **Sharpless, Isaac.** The story of a small college. Philadelphia, The John C. Winston company, 1918. 237 p. front. (port.) plates. 8°.

Account of the development of the ideals and policy of Haverford college.

1208. **Smith, George Adam.** The universities and the war. University record, 4: 119–28, July 1918.

Delivered on the occasion of the 107th convocation of the University of Chicago, June 11, 1918.

1209. Trustees and faculties, by Academicus. Nation, 106: 618–20, May 25, 1918.

1210. A university in a university court; by Censor peregrinus. Nation, 106: 732–34, June 22, 1918.

An account of the trial by the university regents of professors of the University of Nebraska whose attitude toward the war had been questioned.

1211. **Veblen, Thorstein.** The war and the higher learning. Dial, 65: 45–49, July 18, 1918.

Discusses the future of scientific studies in the United States.

SCHOOL ADMINISTRATION.

1212. **Ballou, Frank W.** Efficient finance in a city school system. American school board journal, 56: 21–23, June 1918.

"The present paper constituted the basis of a valuable address and a general discussion of methods of financing schools at the Round table of superintendents of large cities, meeting at the Department of superintendence, February 28, 1918, Atlantic City, N. J."

Also in Educational administration and supervision, 4: 121–32, March 1918.

1213. **Blakely, Paul L.** The Federal government and education. America, 19: 413–14, August 3, 1918.

Opposed to the plan of the National education association to have Congress create a Department of education with a Federal secretary of education.

1214. **Brown, E. M.** The purchase of school supplies and award of contracts. American school board journal, 57: 25–26, 85, July 1918.

Read at the convention of School accounting officers. This paper is a continuation of the author's description of the St. Louis system of purchasing and handling school supplies, which was published in the Journal for July 1917.

1215. **Butterworth, Julian Edward.** Problems in state high school finance. Yonkers-on-Hudson, N. Y., World book company, 1918. ix, 214 p. 12°. (School efficiency monographs)

1216. **Chancellor, William E.** New conditions of the city school superintendency. American school board journal, 56: 24, 77, June 1918.

1217. **Clopper, Edward N.** Federal aid to education. Child labor bulletin, 7: 54–64, May 1918.

Reviews several methods of distribution of federal aid and concludes that such aid should be granted on a national basis rather than on any of the state bases discussed.

1218. **Cook, Albert S.** Centralizing tendencies in educational administration; the county as a unit for local administration. Educational administration and supervision, 4: 133–40, March 1918.

Read at the Atlantic City meeting of the Department of superintendence, National education association.

1219. **Dick, William.** School administration. American school board journal, 57: 23–24, August 1918.

Address delivered before the Department of school administration of the National education association, at Pittsburgh, Pa., July 1–6, 1918.

Discusses such phases of the subject as the board as the financial authority, functions of superintendent and business manager, business side of the schools, etc.

1220. **Judd, Charles H.** A curriculum for school administrators. School and society, 7: 637–40, June 1, 1918.

Discussion before the Society of college teachers of education, Atlantic City, February 25, 1918.

1221. **Kent, Raymond Asa.** A study of state aid to public schools in Minnesota. Minneapolis, University of Minnesota, 1918. 183 p. tables, diagrs. 4°. (The University of Minnesota. Studies in the social sciences no. 11. Bulletin April 1918)

Bibliography: p. 182–83.

1222. **Kinkade, Arthur.** Efficiency in school business management. American school board journal, 57: 29–31, 82, July 1918.

Read at the seventh annual convention of the National association of school accounting officers, Rochester, N. Y., May 21, 1918.

1223. **Linn, Louis P.** Organization powers accorded city school superintendents by general laws. School and society, 7: 601–6, May 25, 1918.

The powers and duties of the superintendent are discussed under the following headings: The course of study, Text-books, apparatus and supplies, Appointment, placing and suspension of teachers, Classification and promotion of pupils, Reports to board, etc.

1224. **Mandel, Arch M.** Business department of the Detroit board of education. American school board journal, 56: 25–26, June 1918.

1225. **Strayer, George D.** Educating the public to the financial needs of the schools. American school, 4: 137–38, May 1918.

Discusses methods of bringing home to the public one of the most important lessons which it must learn in the immediate future—the necessity for more money for schools if the education of American children is not to suffer.

1226. **Taylor, Edward L.** School finances as a war-time problem. American school board journal, 57: 38, 61, August 1918.

Address delivered before the Department of school administration of the National education association, at Pittsburgh, Pa., July 1–6, 1918.

1227. **Wheat, Harry G.** Costs of instruction in the high schools of West Virginia. School review, 26: 438–50, June 1918.

Study based on questionnaire sent to the 75 high schools in West Virginia. Says that the average size of classes is the most important factor which enters into a determination of the cost of instruction.

SCHOOL MANAGEMENT.

1228. **Bowden, A. O.** Student self-government. School and society, 8: 97–102, July 27, 1918.

1229. **Childs, Hubert Guy.** An investigation of certain phases of the reorganization movement in the grammar grades of Indiana public schools. Fort Wayne, Ind., Fort Wayne printing co., 1918. 187 p. tables. 8°.

1230. **Ijams, E. H.** Grading on a scientific basis. Educational exchange, 33: 3–8, June 1918.

1231. **MacDonald, D. J.** Grading pupils in vocational subjects. Indianapolis, Ind. [1918] [15] p. 8°.

1232. **Rugg, H. O.** Teachers' marks and the reconstruction of the marking system. Elementary school journal, 18: 701–19, May 1918.

Endeavors "to summarize the results of recent investigations, to present complete bibliographic material, and to present systematically the essence of current thinking on the problem." Gives a program for the reconstruction of the marking system.

SCHOOL ARCHITECTURE.

1233. **Berkowitz, J. H.** Better schoolhouses as a factor in race betterment. 8 p. 8°.

Reprinted from the American school board journal, June 1918.

From discussion of Report of the Committee on standardization of schoolhouses, delivered at the annual meeting of the Department of superintendence, National education association, Atlantic City, N. J., February 27, 1918. Revised.

1234. **Kitchen, John H.** The heating and ventilation of school buildings. Kansas teacher, 7: 28–31, June–July 1918.

1235. **Rapeer, Louis W.** The case against unilateral lighting. American school board journal, 57: 33–34, July 1918.

Recommends a classroom lighted on three sides.

1236. ———. Summer school sanitation. American journal of school hygiene, 2: 53–62, June 1918.

1237. **Sipple, L. B.** What constitutes a good sanitary heating and ventilating system for a one or two-room school building. Nebraska teacher, 20: 453–55, June 1918.

SCHOOL HYGIENE AND SANITATION.

1238. **Books, William J.** The healthy school child. Schenectady's system of keeping him healthy. New York, W. Wood & company [1918] 28 p. 12°.

Reprinted from the Medical record, May 25, 1918.

1239. **King, Henry Churchill.** Why I am opposed to compulsory smoking at Oberlin. Ohio educational monthly, 67: 264–67, July 1918.

Reprinted from the North American student.

The president of Oberlin college tells why he is opposed to college boys smoking.

1240. **O'Meara, Catharine R.** The teacher and the health of the school child. New Haven teachers' journal, 11: 10–15, June 1918.

1241. **Uzzell, Camelia W.** A demonstration in health education. Survey, 40: 257–59, June 1, 1918.

Study of malnutrition among pupils of New York public schools.

1242. **Wallis, C. Edward.** School doctors and school dentistry. School hygiene (London), 9: 24–27, April 1918.

Describes functions of a school medical inspection in regard to dental condition of children.

1243. **Whittaker, H. A.** Investigations on swimming pools at the University of Minnesota. Journal of the American medical association, 70: 1901–05, June 22, 1918.

Sanitary precautions regarding swimming pools.

1244. **Wile, Ira S.** Public health publicity and education through public schools. American journal of public health, 8: 336–40, May 1918.

Value of public school as a medium of health propaganda. Writer says it is of vital importance to correlate publicity with public education.

1245. **Wood, Thomas D.** War's emphasis on health education. Arkansas teacher, 6: 8–11, June 1918.

A national program of health education.

PHYSICAL TRAINING.

1246. **Averill, Lawrence Augustus.** The report of the Commission on military training in New Jersey. American journal of school hygiene, 2: 68–72, June 1918.

1247. **Gregory, Thomas.** Modern athletics in the far east. World's work, 36: 197–206, June 1918.

Introduction of Western games, etc., into the Orient. Educational values. Described as a new force for nationalization and for international good will.

1248. **Johnson, G. E.** A defense of intercollegiate athletics. Harvard graduates' magazine, 26: 583–94, June 1918.

Takes up the arguments that have been urged against intercollegiate athletics and in conclusion says that "It would be madness for college authorities to declare war upon intercollegiate athletics."

1249. **Perrin, Ethel.** Minimum essentials within the schools as to time, equipment and activities. Mind and body, 25: 152–59, June 1918.

Read at the convention of the American physical education association, Philadelphia, April, 1918.

Minimum essentials in physical education in elementary schools and in high schools.

1250. **Storey, Thomas A.** Plans for the school recognition and credit of home and community recreation activities. Playground, 12: 191–97, August 1918.

Memoranda and suggestions from the physical training bureau of the Military training commission, state of New York.

Presented before the New York state association of district superintendents of schools, New York city, January 18, 1918.

PLAY AND PLAYGROUNDS.

1251. **Bureau of educational experiments, New York.** A catalogue of play equipment, compiled by Jean Lee Hunt. New York, Bureau of educational experiments, 1918. 48 p. illus. 8°. (Bulletin no. 8)

1252. **Pearson, Ruth R.** Street play and its relation to the neighborhood center. Playground, 12: 104–10, June 1918.

A survey of street play in Chicago.

1253. **Wrightson, Hilda A.** Games for children's development. New York, Prospect press, inc., 1918. xi p., 2 l., 17–239 p. front., illus., plates. 12°.

SOCIAL ASPECTS OF EDUCATION.

1254. **Croly, Herbert.** A school of social research. New republic, 15: 167–71, June 8, 1918.

Outlines a prospective school of research, in which graduates could be trained for specific and important social jobs.

1255. **Jackson, Henry E.** A community center; what it is and how to organize it. New York, The Macmillan company, 1918. [17], 159 p. illus. 12°.

A reproduction of Bulletin, 1918, no. 11, of the U. S. Bureau of education. This book contains also an additional section describing typical community centers in operation.

1256. **Reisner, Edward H.** Sociological principles fundamental to pedagogical method. Educational review, 56: 28–36, June 1918.

A reply to a similar article by Dr. R. L. Finney, in Educational review, for February 1918.

1257. **Smith, Walter R.** The fundamentals of a socialized educational program. School and society, 8: 35–41, July 13, 1918.

1258. ———. The sociological aspects of our educational aims. American journal of sociology, 24: 81–95, July 1918.

Writer says that in the field of education sociologists have been laggards. Discusses social aspects of physical training, culture, vocational efficiency, etc.

1259. **Stormzand, M. J.** Social aspects of language mastery. Wisconsin journal of education, 50: 168–73, June 1918.

CHILD-WELFARE.

1260. **Holt, L. Emmett.** The undernourished child. General Federation magazine, 17: 15–16, August 1918.

Presents a scheme for combating malnutrition.

1261. **McIntire, Ruth.** Child labor and juvenile delinquency. Journal of delinquency, 3: 95–114, May 1918.

1262. **West, *Mrs.* Max.** Child care. Part 1. The preschool age. Washington, Government printing office, 1918. 88 p. 8°. (U. S. Children's bureau. Publication no. 30)

This bulletin discusses the care of the child from 2 to 6 years of age.

MORAL EDUCATION.

1263. L'éducation morale dans les dépôts militaires. Éducation, 10: 34–50, March 1918.

A psychological study of the moral temper of the French soldiers in the encampments.

1264. The improvement of character education. Journal of education, 88: 144–45, August 8, 1918.

By a committee of twenty-three, Dr. David Snedden, chairman.

Speaks of the urgent need of character instruction in the public schools and, hence, the need for research into the best methods of moral and civic education.

1265. **Squires, Vernon P.** A moral code for boys and girls. Quarterly journal of the University of North Dakota, 8: 347–54, July 1918.

One of the codes submitted in the competition held by the National institution for moral instruction.

RELIGIOUS EDUCATION.

1266. Bible-teaching in colleges. Standardization of Biblical departments in colleges. Religious education, 13: 281–86, August 1918.

The report of the committee on the standardization of Biblical departments in colleges and universities to the Religious education association, 1918.

1267. **Cope, Henry Frederick.** Religious education in the church. New York, C. Scribner's sons, 1918. 274 p. 12°.

References at end of chapters.

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1270. **Wardle, Addie Grace.** History of the Sunday school movement in the Methodist Episcopal church. New York, Cincinnati, The Methodist book concern [1918] 232 p. 8°.

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1272. **Dimmitt, Roy.** Trade and industrial education under the Smith-Hughes act. School and home, 10: 6–8, June 1918.

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1273. **Henning, A. E.** Vocational departments in high schools or separate vocational schools? Industrial-arts magazine, 7: 258–59, July 1918.

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1274. **Hill, David Spence.** The application of research in relating industry and education. School and society, 8: 1–11, July 6, 1918.

1275. **Howell, C. E.** Securing efficiency of the workman in the manual training shop. Industrial-arts magazine, 7: 260–64, July 1918.

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1276. **Judd, Charles H.** Industry and the liberal arts. School and society, 8: 151–64, August 10, 1918.

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1277. **Kreuzpointner, Paul.** The Smith-Hughes act from a layman's standpoint. School and society, 8: 102–5, July 27, 1918.

Discusses alleged weak points in the Smith-Hughes act.

1278. **Marot, Helen.** Creative impulse in industry; a proposition for educators. New York, E. P. Dutton & company [1918] xxii, 146 p. 12°.

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1280. **Perry, L. Day.** "Systems" of industrial education. Industrial-arts magazine, 7: 287–92, August 1918.

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1283. **Gauthier, Léon.** Une section agricole d'école primaire supérieure. Revue pédagogique, 72: 339–46, May 1918.

1284. **Hedrick, W. O.** The tutored farmer. Scientific monthly, 7: 158–65, August 1918.

1285. **Sévrette, Gaston.** Le jardin de l'école. Revue pédagogique, 72: 347–50, May 1918.

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1288. **Langworthy, C. F.** Teaching food values. Journal of home economics, 10: 295–302, July 1918.

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1291. **Lyon, Leverett S.** The commercial curriculum in secondary schools. School review, 26: 401–15, June 1918.

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1293. **Swiggett, Glen Levin.** Why should the government train for foreign service? School and society, 8: 181–87, August 17, 1918.

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1294. **Thompson, C. A.** Some ways by which the teaching of commercial subjects can be vitalized and motivated. Journal of the New York state teachers' association, 5: 149–55, May 1918.

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1310. **Rindge, Fred H.,** *jr.* Uncle Sam's adopted nephews. Harper's magazine, 137: 281–89, July 1918.

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1341. **Nice, Margaret Morse.** Ambidexterity and delayed speech development. Pedagogical seminary, 25:141–62, June 1918.

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1346. **Mansbridge, Albert.** The education of the working classes. Contemporary review, 113: 685-94, June 1918.

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1347. **Sherwood, George H.** Free education by the American museum of natural history in public schools and colleges. History and status of museum instruction and its extension to the schools of Greater New York and vicinity. . . . With foreword by President Fairfield Osborn. New York, 1918. 72 p. plates, fold. map. 4°. (Miscellaneous publications of the American museum of natural history, no. 10)

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1350. The Bureau of education and the educational survey movement; by S. P. Capen. Washington, 1918. 6 p. (Higher education circular no. 11)

1351. The Bureau of extension of the University of North Carolina; by L. R. Wilson and L. A. Williams. Washington, 1918. 30 p. (Bulletin, 1918, no. 7)

1352. Certain defects in American education and the remedies for them. By Charles W. Eliot. Washington, 1918. 8 p. (Teeacher's leaflet no. 5, June 1918)

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1355. Educational conditions in Arizona. Report of a survey by the United States Bureau of education. Washington, 1918. 200 p. illus. (Bulletin, 1917, no. 44)

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1357. Guide to United States government publications; compiled by Walter I. Swanton. Washington, 1918. 206 p. (Bulletin, 1918, no. 2)

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Outline of an emergency course of instruction on the war; prepared by Charles A. Coulomb, Armand J. Gerson, Albert E. McKinley, under the direction of the National board for historical service. Washington, 1918. 31 p. (Teachers' leaflet no. 4, August 1918)

Public school classes for crippled children; by Edith Reeves Solenberger. Washington, 1918. 52 p. plates. (Bulletin, 1918, no. 10)

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nni bulletin of the University of Virginia, Charlottesville, Va.
nni register (University of Pennsylvania), Burlington, N. J.
rica, 59 East Eighty-third Street, New York, N. Y.
rican annals of the deaf, 2419–2421 Greenmount Avenue, Baltimore, Md.
rican city, 93 Nassau Street, New York, N. Y.
rican education, 50 State Street, Albany, N. Y.
rican journal of care for cripples, 3505 Broadway, New York, N. Y.
rican journal of nursing, 2419–2421 Greenmount Avenue, Baltimore, Md.
rican journal of public health, 289 Fourth Avenue, New York, N. Y.
rican journal of school hygiene, Worcester, Mass.
rican journal of sociology, University of Chicago press, Chicago, Ill.
rican magazine, 381 Fourth Avenue, New York, N. Y.
rican magazine of art, 215 West Fifty-seventh Street, New York, N. Y.
rican Oxonian, Menasha, Wis.
rican penman, 30 Irving Place, New York, N. Y.
rican physical education review, 93 Westford Avenue, Springfield, Mass.
rican review of reviews, 30 Irving Place, New York, N. Y.

American school, P. O. box 134, Milwaukee, Wis.
American school board journal, 354 Milwaukee Street, Milwaukee, Wis.
American schoolmaster, State normal school, Ypsilanti, Mich.
Annals of the American academy of political and social science, Woodland Avenue and Thirty-sixth Street, Philadelphia, Pa.
Arkansas teacher, Conway, Ark.
Asia, 627 Lexington Avenue, New York, N. Y.
Association of American colleges bulletin, 19 South La Salle Street, Chicago, Ill.
Athenæum, London, England.
Atlantic monthly, 41 Mount Vernon Street, Boston, Mass.
Banker-farmer, Champaign, Ill.
Boston medical and surgical journal, 101 Tremont Street, Boston, Mass.
British journal of psychology, London, England.
Bulletin of high points in the teaching of modern languages in the high schools of New York City, Board of education building, New York, N. Y.
Bulletin of the High school teachers' association of the District of Columbia, Washington, D. C.
Business educator, Columbus, Ohio.
California taxpayers' journal, Los Angeles, Cal.
Catholic educational review, Washington, D. C.
Century magazine, 353 Fourth Avenue, New York, N. Y.
Child, London, England.
Child labor bulletin, 105 East Twenty-second Street, New York, N. Y.
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Chinese students' monthly, Ashburnham, Mass.
Christian student, 150 Fifth Avenue, New York, N. Y.
Classical journal, University of Chicago press, Chicago, Ill.
Classical weekly, Barnard college, New York, N. Y.
Colorado school journal, Denver, Colo.
Columbia alumni news, Columbia university, New York, N. Y.
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Columbia university quarterly, Columbia university, New York, N. Y.
Contemporary review, 249 West Thirteenth Street, New York, N. Y.
Country gentleman, Independence Square, Philadelphia, Pa.
Current education, St. Martins, Philadelphia, Pa.
Dental cosmos, Twelfth and Chestnut Streets, Philadelphia, Pa.
Dial, 152 West Thirteenth Street, New York, N. Y.
Education, 120 Boylston Street, Boston, Mass.
Éducation, Paris, France.
Educational administration and supervision, Warwick and York (inc.), Baltimore, Md.
Educational exchange, Birmingham, Ala.
Educational foundations, 31–33 East Twenty-seventh Street, New York, N. Y.
Educational news. *See* Scottish educational journal.
Educational review, Columbia university, New York, N. Y.
Educational standards, Charlestown, Mass.
Educator-journal, 403 Newton Claypool building, Indianapolis, Ind.
Elementary school journal, University of Chicago press, Chicago, Ill.
Engineering education, Lancaster, Pa.
English journal, University of Chicago press, Chicago, Ill.
Florida schoolroom, Gainesville, Fla.
General federation magazine, 40 East Twenty-second Street, New York, N. Y.
General science quarterly, Salem, Mass.
Harper's magazine, Franklin Square, New York, N. Y.
Harvard graduates' magazine, Exchange Building, Boston, Mass.

Harvard law review, Cambridge, Mass.
Hibbert journal, London, England, and 6 Beacon Street, Boston, Mass.
High school journal, Chapel Hill, N. C.
High school quarterly, Athens, Ga.
History teacher's magazine, McKinley publishing company, Philadelphia, Pa.
Hospital school journal, Detroit, Mich.
Illinois association of teachers of English bulletin, Urbana, Ill.
Illinois teacher, Urbana, Ill.
Independent, 119 West Fortieth Street, New York, N. Y.
Indiana instructor, 607 Occidental Building, Indianapolis, Ind.
Industrial-arts magazine, 129 Michigan Street, Milwaukee, Wis.
Inter-America, Doubleday, Page, and company, New York, N. Y.
Inter-mountain educator, Missoula, Mont.
International review of missions, Edinburgh, Scotland.
Johns Hopkins alumni magazine, Baltimore, Md.
Journal des économistes, Paris, France.
Journal of applied psychology, Worcester, Mass.
Journal of delinquency, Whittier State school, Whittier, Cal.
Journal of education, 6 Beacon Street, Boston, Mass.
Journal of education, London, England.
Journal of educational psychology, Warwick and York (inc.), Baltimore, Md.
Journal of experimental pedagogy and training college record, London, England.
Journal of experimental psychology, Princeton, N. J.
Journal of geography, Madison, Wis.
Journal of home economics, Station N, Baltimore, Md.
Journal of psycho-asthenics, Faribault, Minn.
Journal of race development, Worcester, Mass.
Journal of sociologic medicine, 52 North Fourth Street, Easton, Pa.
Journal of the American medical association, 535 Dearborn Street, Chicago, Ill.
Journal of the Association of collegiate alumnae, University of Chicago press, Chicago, Ill.
Journal of the National education association, 1400 Massachusetts Avenue, Washington, D. C.
Journal of the New York State teachers' association, 5 South Water Street, Rochester, N. Y.
Kansas teacher, Topeka, Kans.
Kentucky high school quarterly, Lexington, Ky.
Kindergarten and first grade, Springfield, Mass.
Law quarterly review, London, England.
Library journal, 241 West Thirty-seventh Street, New York, N. Y.
Literary digest, 354–360 Fourth Avenue, New York, N. Y.
Louisiana school work. *See* Southern school work.
McEvoy magazine, 6 Third Avenue, Brooklyn, N. Y.
Manual training magazine, Manual arts press, Peoria, Ill.
Mathematics teacher, 41 North Queen Street, Lancaster, Pa.
Mental hygiene, Concord, N. H.
Midland schools, Des Moines, Iowa.
Millard's review of the Far East, Shanghai, China.
Mind and body, New Ulm, Minn.
Mississippi educational advance, Jackson, Miss.
Missouri school journal, Jefferson City, Mo.
Moderator-topics, Lansing, Mich.
Modern language journal, Sixty-eighth Street and Park Avenue, New York, N. Y.
Modern language teaching, London, England.
Monatshefte für deutsche sprache und pädagogik, Milwaukee, Wis.

Mother's magazine, 95 Madison Avenue, New York, N. Y.
Munsey's magazine, 8 West Fortieth Street, New York, N. Y.
Nation, 20 Vesey Street, New York, N. Y.
National association of corporation schools bulletin, Irving Place and Fifteenth Street, New York, N. Y.
National geographic magazine, Hubbard memorial hall, Washington, D. C.
National municipal review, North American building, Philadelphia, Pa.
Nation's business, Chamber of commerce of the United States, Washington, D. C.
Nature, London. England.
Nature-study review, Ithaca, N. Y.
Nebraska teacher, Lincoln, Nebr.
New Haven teachers journal, New Haven, Conn.
New Jersey state research, Newark, N. J.
New Mexico journal of education, Santa Fe, N. Mex.
New republic, 421 West Twenty-first Street, New York, N. Y.
Nineteenth century and after, 249 West Thirteenth Street, New York, N. Y.
Normal instructor and primary plans, Dansville, N. Y.
Normal school bulletin, Charleston, Ill.
North American review, 171 Madison Avenue, New York, N. Y.
North Carolina high school bulletin, Chapel Hill, N. C.
Northwest journal of education, Seattle, Wash.
Nuova antologia, Rome, Italy.
Ohio educational monthly, Columbus, Ohio.
Ohio teacher, Columbus, Ohio.
Oklahoma home and school herald, Oklahoma City, Okla.
Old Penn. *See* Pennsylvania gazette.
Open court, 122 South Michigan Avenue, Chicago, Ill.
Oregon teachers' monthly, Salem, Oreg.
Outlook, 287 Fourth Avenue, New York, N. Y.
Parents review, London, England.
Pedagogical seminary, Worcester, Mass.
Pennsylvania gazette, University of Pennsylvania, Philadelphia, Pa. Formerly Old Penn.
Pennsylvania school journal, Lancaster, Pa.
Pittsburgh school bulletin, Pittsburgh, Pa.
Playground, 1 Madison Avenue, New York, N. Y.
Popular educator, 50 Bromfield Street, Boston, Mass.
Porto Rico school review, San Juan, Porto Rico.
Posse gymnasium journal, Boston, Mass.
Princeton alumni weekly, Princeton, N. J.
Progressive teacher, Nashville, Tenn.
Psychoanalytic review, 41 North Queen Street, Lancaster, Pa.
Psychological clinic, Woodland Avenue and Thirty-sixth Street, Philadelphia, Pa.
Public libraries, Library bureau, Chicago, Ill.
Publishers' weekly, 241 West Thirty-seventh Street, New York, N. Y.
Quarterly journal of speech education, Menasha, Wis.
Quarterly journal of the University of North Dakota, University, N. Dak.
Recalled to life, London, England.
Religious education, 1440 East Fifty-seventh Street, Chicago, Ill.
Revue de Paris, Paris, France.
Revue des deux mondes, Paris, France.
Revue internationale de l'enseignement, Paris, France.
Revue pédagogique, Paris, France.
Revue universitaire, Paris, France.
Rivista pedagogica, Rome, Italy.

Rural school messenger, Kirksville, Mo.
School, 154 Fifth Avenue, New York, N. Y.
School, Toronto, Canada.
School and home, Atlanta, Ga.
School and home education, Bloomington, Ill.
School and science review, Austin, Tex.
School and society, The Science press, Garrison, N. Y.
School-arts magazine, 120 Boylston Street, Boston, Mass.
School education, Minneapolis, Minn.
School guardian, London, England.
School hygiene, London, England.
School index, Cincinnati, Ohio.
School life, Bureau of education, Washington, D. C.
School music, Keokuk, Iowa.
School review, University of Chicago press, Chicago, Ill.
School science and mathematics, Mount Morris, Ill.
School world, London, England.
Schoolmaster, London, England.
Science, The Science press, Garrison, N. Y.
Scientific monthly, The Science press, Garrison, N. Y.
Scottish educational journal, Edinburgh, Scotland. Formerly Educational news.
Scribner's magazine, 597 Fifth Avenue, New York, N. Y.
Sewanee review, Sewanee, Tenn.
Sierra educational news, San Francisco, Cal.
Smith alumnae quarterly, Concord, N. H.
South Dakota educator, Mitchell, S. Dak.
Southern school work, Alexandria, La. Formerly Louisiana school work.
Southern workman, Hampton, Va.
Survey, 112 East Nineteenth Street, New York, N. Y.
Teachers college record, Teachers college, Columbia university, New York, N. Y.
Teacher's journal, Marion, Ind.
Teaching, Emporia, Kans.
Technology review, Boston, Mass.
Texas school journal, Dallas, Tex.
Times educational supplement, London, England.
Trained nurse and hospital review, 38–40 West Thirty-second Street, New York, N. Y.
Training school quarterly, Greenville, N. C.
Ungraded, 500 Park Avenue, New York, N. Y.
University journal, Lincoln, Nebr.
University record, University of Chicago press, Chicago, Ill.
Unpopular review, 35 West Thirty-second Street, New York, N. Y.
Virginia journal of education, Richmond, Va.
Vocational summary, Federal board for vocational education, Washington, D. C.
Volta review, Volta bureau, Washington, D. C.
West Virginia school journal and educator, Charleston, W. Va.
Western journal of education, San Francisco, Cal.
Western teacher, Milwaukee, Wis.
Westonian, Westtown, Pa.
Wisconsin journal of education, Madison, Wis.
World's work, Doubleday, Page and company, Garden City, N. Y.
Wyoming school journal, Laramie, Wyo.

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 34

MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS

OCTOBER, 1918

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1918

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MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS.

Compiled by the Library Division, Bureau of Education.

CONTENTS.—Educational history and biography—Current educational conditions—Education and the war—Educational theory and practice—Educational psychology; Child study—Educational tests and measurements—Special methods of instruction—Special subjects of curriculum—Kindergarten and primary school—Rural education—Secondary education—Teachers: Training and professional status—Higher education—School administration—School management—School hygiene and sanitation—Physical training—Social aspects of education—Child welfare—Moral and religious education—Manual and vocational training—Vocational guidance—Agricultural education—Professional education—Civic education—Americanization of immigrants—Reeducation of war invalids—Education of women—Negro education—Exceptional children—Education extension—Libraries and reading—Bureau of Education: Recent publications.

NOTE.

The record comprises a general survey in bibliographic form of current educational literature, domestic and foreign, received during the monthly period preceding the date of its publication.

This office can not supply the publications listed in this bulletin, other than those expressly designated as publications of the Bureau of Education. Books, pamphlets, and periodicals here mentioned may ordinarily be obtained from their respective publishers, either directly or through a dealer, or, in the case of an association publication, from the secretary of the issuing organization. Many of them are available for consultation in various public and institutional libraries.

Publications intended for inclusion in this record should be sent to the library of the Bureau of Education, Washington, D. C.

EDUCATIONAL HISTORY AND BIOGRAPHY.

1371. **Bloss, W. Escott.** Grammar schools and the teaching of English subjects. School guardian, 43: 229–31, 251–54, August, September 1918.

I. The continental movement. II. The reform movement in England.

1372. **Hart, Joseph Kinmont.** Democracy in education; a social interpretation of the history of education. New York, The Century co., 1918. ix, 418 p. 12°.

"Bibliographical suggestions": p. 410–16.

1373. **Lavisse, Ernest.** Louis Liard. Revue internationale de l'enseignement, 38: 81–99, March–April 1918.

Reprinted from Revue de Paris, February 1, 1918.

1374. Luther Halsey Gulick, 1865–1918. Survey, 40: 579–80, August 24, 1918.

A brief sketch of the life and work of Luther Halsey Gulick.

1375. **Mead, Arthur Raymond.** The development of free schools in the United States as illustrated by Connecticut and Michigan. New York city, Teachers college, Columbia university, 1918. 236 p. tables. 8°. (Teachers college, Columbia university. Contributions to education. no. 91.)

1376. **Wulf, Maurice de.** The teaching of philosophy and the classification of the sciences in the thirteenth century. Philosophical review, 27: 356-73, July 1918.

By a professor of the University of Louvain. Translated from the French by Dr. Katherine E. Gilbert.

CURRENT EDUCATIONAL CONDITIONS.

UNITED STATES.

1377. **Bagley, W. C.** Education and our democracy. School and society, 8: 241-45, August 31, 1918.

Read before the National education association, Pittsburgh, July 1, 1918, introducing the program of the N. E. A. Commission on emergency and readjustment.

1378. **Blakely, Paul L.** The hyphenated schools. America, 19: 461-62, August 17, 1918.

Condemns the proposal of the National education association to extend the powers of the Federal government in the matter of public schools. Says that it is a proposal to begin in this country a policy which contains in germ the Prussian system, and which will issue, as in Germany, in "dehumanized schools."

1379. **Boas, Franz.** The mental attitude of the educated classes. Dial, 65: 145-48, September 5, 1918.

The main contention of this article is that the desires of the masses are in a wider sense human than those of the classes. In all nations, the majority of the intellectuals are conventional—their thoughts are based on tradition, and the range of their vision is liable to be limited.

1380. **Carr, W. L.** The basis of education in a democracy. School and society, 8: 305-12, September 14, 1918.

Read at the National education association conference on the place of classical studies in war-modified education, held at the University of Pittsburgh, July 2 and 3, 1918.

Maintains that American education can not be based on physical science alone.

1381. **Finegan, Thomas E.** Training for national service. School and society, 8: 301-5, September 14, 1918.

Read before the National education association, Pittsburgh, July, 1918.

Writer says that the democracy that is to endure will not only train the minds and the hands of its future citizens; it will also look to the condition of their bodies.

1382. **Norris, Charles G.** Salt; or, The education of Griffith Adams. New York, E. P. Dutton and company [1918] ix, 378 p. 12°.

Author says that the incidents upon which this story is based are founded upon fact—or less than fact. The book undertakes to transcribe the results of personal observations over a number of years and makes the principal character of the tale a well-known type of American youth.

1383. **Schaeffer, Nathan C.** The new program of the National education association. Pennsylvania school journal, 67: 47-50, August 1918.

An opportunity and a responsibility.

1384. **Williams, L. A.** *and* **Johnston, J. H.** A study of the Winston-Salem schools. [Winston-Salem, N. C.] Printed at the High school press, 1918. 93 p. 8°.

FOREIGN COUNTRIES.

1385. **Albeggiani, Ferdinando.** Il nazionalismo e la scuola. Rivista pedagogica, 11: 205–19, March-April 1918.

1386. **India. Bureau of education.** The education of factory children in India. Calcutta, Superintendent government printing, India, 1918. 26 p. plates. 8°. (*Its* Pamphlet no. 2)

1387. **McClure, S. S.** Japanese have a passion for education. National association of corporation schools bulletin, 5: 398–405, September 1918.

A survey of the part education plays in the progress of Japan. The desire for knowledge is greater than the schools can supply. Speaks of the pathetic struggle to gain entrance to the limited number of colleges.

1388. **Ormond, Frances L.** National service in the non-English school. School (Toronto) 7: 32–34, September 1918.

The work of the school in the training of "new-Canadians."

1389. **Rignano, Eugenio.** The school of to-morrow. Monist, 28: 379–93, July 1918.

Author is editor of Scientia, Milan, Italy.

1390. **Roy, Basanta Koomar.** The new education in India. Dial, 65: 150–53, September 5, 1918.

EDUCATION AND THE WAR.

1391. **Bawden, William T.** Training the fighting mechanic. Manual training magazine, 20: 1–10, September 1918.

Shows how the Committee on education and special training of the War department is giving special technical courses to certain units of enlisted men as a part of their preparation for military duties.

1392. The colleges and the war. Outlook, 120: 48–50, September, 1918.

Government plan for keeping the colleges alive during the war; creation of the students' army training corps and other activities described.

1393. **Denbigh, John H.** Our schools during and after the war. School, 29: 503, August 15, 1918.

To be continued.

1394. **National education association.** Education and the present emergency. Educational administration and supervision, 4: 310–31, June 1918.

A symposium of "Education and the war" discussions at the Pittsburgh meeting of the National education association.

Contains: 1. G. D. Strayer: The present emergency in education, p. 310–12. 2. G. S. Hall: Some educational values of war, p. 312–16. 3. T. B. Kidner: Vocational re-education of disabled soldiers, p. 316–17. 4. R. H. Wilson: The war garden movement, p. 318–19. 5. C. A. Prosser: Vocational education under the Smith-Hughes act, p. 320–22. 6. David Snedden: Character education, p. 322–24. 7. W. S. Small: The state normal school and the problems of child health, p. 326–27. 8. W. S. Deffenbaugh: Recent growth in city school administration, p. 327–29. 9. G. D. Strayer: The emergency in secondary education, p. 329–31.

1395. **Powell, E. E.** The long arm of learning; how the "land-grant colleges" are backing Uncle Sam. American review of reviews, 58: 64–66, July 1918.

Shows what the expert scientists of the colleges have done to help the United States win the war.

1396. **Shotwell, J. T.** University war problems. Columbia university quarterly, 20: 225–34, July 1918.

An address at the General assembly of Columbia university on May 7, 1918. Considers the adjustment of Columbia university to the new era which the war has ushered in.

1397. **Slichter, W. I.** The war and technical education. Columbia university quarterly, 20: 281–86, July 1918.

1398. **Swain, Joseph.** The crisis in the schools. Nation, 107: 246–48, September 7, 1918.

Discusses "the threatened collapse of the teaching profession," owing to war conditions. A plea for better salaries and better living conditions for teachers.

1399. **Van Hise, Charles R.** The war work of the University of Wisconsin. American review of reviews, 58: 67–69, July 1918.

Describes the various war activities of the university in an illustrated article.

1400. **Whiting, Isabel Kimball.** Keeping school without fire. School and society, 8: 245–49, August 31, 1918.

Shows how the teachers and pupils might have been kept together during coal shortage last winter by planning trips to history museums, public libraries, etc., when it was necessary to close the schools.

EDUCATIONAL THEORY AND PRACTICE.

1401. **Richmond, Kenneth.** Education for liberty. London, W. Collins sons & co. ltd. [1918] 253 p. 12°.

Author defines education for liberty as education in fellowship, meaning by the latter a unity of spirit in a diversity of minds. This can be attained only by teaching that all knowledge is one. With no conception of the unity of knowledge there is no fellowship in knowledge, and no liberty in thought.

EDUCATIONAL PSYCHOLOGY; CHILD STUDY.

1402. **Berliner, Anna.** Aesthetic judgments of school children. Journal of applied psychology, 2: 229–42, September, 1918.

An endeavor to find how various groups of children would rank a series of picture cards according to the aesthetic value of the pictures. Experiment made in Hebrew orphan asylum, New York city.

1403. **Norsworthy, Naomi, *and* Whitley, Mary Theodora.** The psychology of childhood. New York. The Macmillan company, 1918. xix, 375 p. 8°. (Brief course series in education, ed. by P. Monroe)

1404. **Swift, Edgar James.** Psychology and the day's work; a study in the application of psychology to daily life. New York, Charles Scribner's sons, 1918. 388 p. 8°.

CONTENTS.—1. Organization for mental efficiency.—2. Thinking and acting.—3. Habit in preparation for efficiency.—4. The psychology of learning.—5. Fatigue and its psychology.—6. Curiosities of memory.—7. Memory and its improvement.—8. The psychology of testimony and rumor.—9. Our varying selves.—10. Psychology of digestion.

This book undertakes to interpret a few of the personal experiences of daily life. For this purpose, the writer has tried to select types of conduct, as well as phases and causes of behavior, that are fundamental to thinking and acting, whether in the life of social intercourse or in the business and professional world.

EDUCATIONAL TESTS AND MEASUREMENTS.

1405. **Beeley, Arthur Lawton.** An experimental study in left-handedness, with practical suggestions for schoolroom tests. Chicago, Ill., The University of Chicago press [1918] viii, 74 p. illus., tables. 8°. (Supplementary educational monographs pub. in conjunction with the School review and the Elementary school journal, vol. ii, no. 2, whole no. 8)

1406. **Brandenburg, George C.** Psychological aspects of language. Journal of educational psychology, 9: 313–32, June, 1918.

"A contribution to the question of the relation of language to general intelligence. On the basis of an extensive vocabulary test given to more than 1,700 pupils in grades III to XII the author discusses the relation of vocabulary to school grades, to standing in various school subjects, and to general intelligence as determined by the Binet and other tests."

1407. **Connecticut school superintendents' association. Committee on standard tests and measurements.** Report. Hartford, Conn., State board of education [1918] 10 p. 8° (State board of education Connecticut bulletin 75. Series 1917–18)

Committee: Ernest C. Witham, Carlon E. Wheeler.

1408. **Cornell, C. B.** A graduated scale for determining mental age. Kentucky high school quarterly, 4: 3–39, July, 1918.

Bibliography: p. 37–39.

Results of an attempt by the author to find a satisfactory scale for mental measurement to be used in the public schools.

1409. **Hubbard, O. S.** Some individual differences among the pupils of two fifth-grade classes. Educational administration and supervision, 4: 245–60, May, 1918.

Results of some tests given in the schools of Alameda, California.

1410. **McCall, W. A.** *and* **Johnson, Abigail E.** A comparison of open-air with indoor classes. Teachers college record, 19: 352–68, September, 1918.

In conclusion says that the open-air groups combined made greater progress in the tested functions than did the indoor groups.

1411. **Monroe, Walter S.** Monroe's standardized silent reading tests. Journal of educational psychology, 9: 303–12, June, 1918.

"The Kansas silent reading tests have been criticised because many of the tests resembled arithmetical puzzles rather than ordinary reading material. Dr. Monroe has revised the tests, using material from school readers; has standardized them on a large number of pupils, and has selected samples whose comprehension values are fairly uniform."

1412. **Murdock, Katherine.** Rate of improvement of the feeble-minded as shown by standardized educational tests. Journal of applied psychology, 2: 243–49, September, 1918.

An attempt "to compare the rate of progress made by feeble-minded children, with that of normal children, of the same mental age in elementary subjects."

1413. **Otis, Arthur S.** An absolute point scale for the group measurements of intelligence. Part I–II. Journal of educational psychology, 9: 239–61, 333–48, May, June, 1918.

1414. **Pintner, Rudolf.** The measurement of progress in language ability. Journal of educational psychology, 9: 270–77, May, 1918.

1415. **Pressey, S. L.** *and* **Pressey, L. W.** A group point scale for measuring general intelligence, with the first results from 1,100 school children. Journal of applied psychology, 2: 250–69, September, 1918.

Describes origin and plan of the scale; the tests; and validation of the scale. Study of Indian school children.

1416. **[Prout, F. J.]** Handwriting measurements, standards and methods. Report and results of Chillicothe, Ohio, surveys in writing. [Columbus, O., Zaner & Bloser, 1917?] 16 p. diagrs. 8°.

SPECIAL METHODS OF INSTRUCTION.

1417. **Kilpatrick, William H.** The project method. Teachers college record, 19: 319–35, September, 1918.

SPECIAL SUBJECTS OF CURRICULUM.

1418. **Alexander, Hartley B.** "Enemy language." Midwest quarterly, 5: 95–109, January, 1918.

A judicial discussion of the German language question in our schools.

1419. **Blanchard, Milton E.** The need to define anew the values of Latin. School and society, 8: 215–20, August 24, 1918.

Read before the Classical association of the Pacific states meeting with the National education association at Portland, Oregon, July 11, 1917.

1420. **Chamberlain, James F.** Essentials in geography. School and society, 8: 220–25, August 24, 1918.

The purpose of the study of geography, its content and limitations.

1421. **Gathany, J. Madison.** Tying history to life. Outlook, 120: 58–64, September 11, 1918.

Motivation in the study of history. Lays emphasis on the study of current history.

1422. **Palmer, Gladys F.** Outline study of a short course in domestic science. Education, 39: 22–35, September, 1918.

Course given by teachers of domestic science in the High school of commerce, Springfield, Mass., last year.

1423. **Perrotin, Léo.** L'éducation littéraire d'après Stendhal. Revue universitaire, 27: 36–47, June, 1918.

Discusses the educational views expressed in the correspondence of Stendhal, in which he recommended the study of the French classics to his sister and others.

1424. Progressive requirements in American history for junior and senior high schools. School review, 26: 473–89, September, 1918.

Report of a committee to the Department of history and other social studies of Academies and high schools in relation with the University of Chicago, May 10, 1918. R. M. Tryon, chairman.

The following topics are treated: 1. General organization of the field of American history for teaching purposes; 2. Maps to make; 3. Dates—events to know and remember; 4. Personages to know and identify; 5. Topics with which students should be familiar on completing the course; 6. General method of procedure.

1425. **Sarton, George.** The teaching of the history of science. Scientific monthly, 7: 193–211, September, 1918.

Discussed under the following headings: Teaching of historical facts, Teaching of scientific facts, Equipment, Typical program, etc.

1426. **Silverman, Alexander.** A survey of high-school chemistry in Pennsylvania. Science, n. s. 48: 179–82, August 23, 1918.

Results of a questionnaire sent out for the purpose of establishing a relationship between high-school and college chemistry.

1427. **Southard, E. E.** Mental hygiene and social work: notes on a course in social psychiatry for social workers. Mental hygiene, 2: 388–406, July, 1918.

A plea for the study of mental hygiene, and the training of experts. Gives brief suggestions as to the desirable content of courses for psychiatric social workers of value in war time and after.

1428. Thoughts of a teacher of German. Atlantic monthly, 122: 372–76, September, 1918.

The writer, a college professor of German, built up his department so that it became the strongest in the institution. He loved the subject for its own sake. The article narrates how the present changed conditions in German teaching came about. German as a favorite study, as a foster tongue to be affectionately cultivated, is now no more.

1429. **Tupper, Frederick.** The awful German language. Nation, 107: 248–50, September 7, 1918.
A plea for the study of German language. Quotes opinions expressed in publications of the Federal Bureau of education, etc.

KINDERGARTEN AND PRIMARY SCHOOL.

1430. **Neumann, Henry.** What can the kindergarten do for democracy? Kindergarten and first grade, 3: 269–73, September, 1918.
Address given before the International kindergarten union, Chicago, Ill.

1431. **Zanzi, Carlo.** Le case dei Bambini della Montessori. Rivista pedagogica, 11: 157–82, March–April, 1918.
Concluded from preceding issue.

RURAL EDUCATION.

1432. **Burkholder, A. C.** The rural schools of Hays County, Texas. [San Marcos, Texas, Southwest Texas state normal college] 1918. 35 p. illus., diagrs. 8°. (*On cover:* The normal school bulletin, vol. 7, no. 2, February, 1918.)

1433. **Galpin, Charles Josiah.** Rural life. New York, The Century co., 1918. xvii, 386 p. illus. 8°.
CONTENTS.—1. Physical influences.—2. Psychology of farm life.—3. The social problem.—4. Structure of rural society.—5. Social rôle of the housewife.—6. Social rôle of the child.—7.—Rural relations of high schools.—8. Rural social centers.—9. Country clubs.—10. Country fêtes.—11. Farmers' churches.—12. Timely surveys.—13. Legislation.—14. Study problems.

1434. **Sargent, C. G.** Rural school improvement in Colorado. Fort Collins, Colo., Colorado agricultural college [1918] 62 p. illus. 8°. (*On cover:* Colorado agricultural college bulletin, series XVII, no. 9, July, 1918)

SECONDARY EDUCATION.

1435. **Brelet, Henri.** L'enseignement secondaire—ce qu'il doit être. II–III. Plan d'études de l'enseignement secondaire. Revue internationale de l'enseignement, 38: 189–215, 271–84, May–June, July–August 1918.
First article in the series appeared in the Revue internationale for September–October 1917.

1436. **Dahl, John L.** Raising the standards of scholarship in our secondary schools. Journal of education, 88: 202–3, September 5, 1918.

1437. **Hillegas, Milo B.** The organization of junior high schools in small communities. Teachers college, record, 19: 336–44, September 1918.
Shows how the junior high school meets the demands of the smaller communities of Vermont.

1438. **Smith, Lewis Wilbur.** Illinois high schools; their organization, maintenance, administration, and instruction with particular reference to the township high school. Issued by Francis G. Blair, superintendent of public instruction. [Springfield, Ill., Illinois state journal co., state printers, 1917] 291 p. front (port) tables, diagrs. 8°.

TEACHERS: TRAINING AND PROFESSIONAL STATUS.

1439. **Boston. School committee.** A plan for the promotion of teachers from merit lists. March 1918. Boston, Printing department, 1918. 63 p. diagrs., tables. 8°. (School document no. 2, 1918. Bulletin no. xiv of the Department of educational investigation and measurement)

1440. **Caullery, Maurice.** Les professeurs dans les universités américaines. Revue internationale de l'enseignement, 38: 124–34, March–April 1918.

A chapter from the author's recent book entitled Les universités et la vie scientifique aux États-unis. The article deals with the status, salaries, etc., of American college professors.

1441. **Fairfax, John.** College teachers' salaries. Education, 39: 36–45, September 1918.

Statistics based on Bureau of education bulletins and data compiled by teachers in different states, etc., comparing salaries paid to college teachers with wages received by skilled artisans. A plea for better salaries.

1442. **Landsittel, F. C.** A score card method of teacher-rating. Educational administration and supervision, 4: 297–309, June 1918.

Bibliography: p. 309.

1443. **National education association. Dept. of normal schools. Committee on resolutions and restatement of the declaration of principles.** A conscious program for the normal schools and teachers' colleges of America. Report . . . adopted unanimously at Pittsburgh July 3. 1918. [Greeley, Colo., 1918] 16 [1] p. 8°. (*On cover*: Colorado state teachers bulletin, series xviii, no. 3, June 1918)

Committee: George S. Dick, Charles B. McKenny, J. G. Crabbe.

1444. **Rider, Linda.** The emancipation of the woman teacher. Education, 39: 46–54, September 1918.

1445. **Somers, Arthur S.** The teachers' call to wider service. School, 29: 492–93, August 8, 1918.

Address to the graduating class of the Brooklyn training school.

1446. **Wilkinson, William A.** Functions and organization of practice teaching in state normal schools. Educational administration and supervision, 4: 289–96, June, 1918.

"An attempt to point out the part that practice teaching should play and to outline a method of conducting it to the end that it may be most serviceable as a teacher-training agency."

1447. **Young, Stark.** The return of the teacher. Nation, 107: 251–53, September 7, 1918.

Says that the great teacher is one who sets free the particular genius of each spirit that works with him.

HIGHER EDUCATION.

1448. **Archer, R. L.** The passman; how are our universities to train citizens? London, A. & C. Black, ltd., 1918. xiv, 187 p. 12°.

This book urges that the British universities forthwith assume the task of training leaders of men well fitted in mind and heart to take the conduct of the social reorganization which is to follow the war. Methods of training are discussed.

1449. **Bumpus, Herman C.** Broadening without lowering college entrance requirements. Journal of education, 88: 172–74, August 29, 1918.

1450. **Quinn, Arthur Hobson.** College and business efficiency. Scribner's magazine, 64: 291–94; September 1918.

By the dean of the college, University of Pennsylvania. Compares the college with business, and asserts that the college is more efficient than business even when judged by the standard of the latter. In the supreme test the American college has proven for all time its efficiency as the producer of men.

1451. **Rey, Abel.** Les relations universitaires franco-suisses. Revue internationale de l'enseignement, 38: 19–31, January–February 1918.

SCHOOL ADMINISTRATION.

1452. **Byrne, Lee.** An analysis of the cost of education in Mobile. Educational exchange, 33: 8–16, September; 10–19, October, 1918.

A detailed analysis of the cost of public education in Mobile, Alabama. The system of classification of expenditures and the standards of support for different activities in one of the larger cities of Alabama.

1453. **Charters, W. W.** The administration of methods of teaching. Educational administration and supervision, 4: 237–44, May, 1918.

The collection and dissemination of specific devices in teaching for aiding teachers in overcoming their difficulties.

1454. **Hunter, Fred M.** The superintendent as a leader in interpretating the curriculum. Educational administration and supervision, 4: 271–80, May, 1918.

Read at the Atlantic City meeting, February 28, 1918, of the Department of Superintendence, National education association.

Speaks of the need of intelligent leadership of public opinion. Says that the superintendent should interpret the curriculum to the teachers and members of his force and that the marked changes developing in the present school system should be fostered by an intelligently educated public sentiment.

1455. **Knight, F. B.** Studies in supervision. American school board journal, 57: 33–34, September, 1918.

Intensive supervision of spelling instruction.

1456. **Krebs, Henry C.** Helping teachers a new institution. Journal of education, 88: 237, 242, September 12, 1918.

The measure adopted by the State department of education of New Jersey providing for helping teachers in every county having unsupervised teachers.

1457. **Rossman, John G.** The best school in the state. Arkansas teacher, 6: 8–11, September, 1918.

The necessity for uniform records and reports in order that the efficiency of school systems may be determined.

1458. **Sheldon, E. E.** Educational efficiency. Industrial-arts magazine, 7: 214–18, June, 1918.

Claims that in industry, definite ideals, reliable, immediate and accurate records, and standards of time, instruction, conditions and operation, with suitable rewards for high efficiency are some of the principles that are producing satisfactory results. Thinks that these principles of efficiency, if applied to some of the educational problems, would produce marked changes in the quality and quantity of the work.

1459. **Storer, James.** Uniformity in school accounting. American school board journal, 57: 31–32, September, 1918.

Presented at the meeting of the Department of school administration, National education association, Pittsburgh, Pa., July 3, 1918.

1460. **Talbert, Wilford E.** Should school expenditures be limited? American school board journal, 57: 23–25, 74, September, 1918.

Discusses some limits proposed for regulating school expenditures and some ideal limits.

1461. **Thomas, R. H.** Fire insurance. American school board journal, 57: 35–37, September, 1918.

Address delivered before the Association of school accounting officers, Rochester, May 16, 1918.

Advocates, instead of fire insurance, that school authorities provide fire prevention apparatus, select fire resisting materials for building construction, establish by taxation or otherwise an instantly available interest-bearing fund sufficient in amount to really indemnify, and thereafter carry their own school risks.

SCHOOL MANAGEMENT.

1462. **Harris, G. L.** Supervised study in the University of Chicago high school. School review, 26: 490–510, September, 1918.

Methods of supervision described; study-class coordination; class attendance, etc. Work in mathematics emphasized.

Paper read before the mathematics' section of the 1918 Conference of secondary schools affiliated with the University of Chicago.

1463. **Waits, H. E.** Saving time for instruction. School news and practical educator, 32: 2–3, September, 1918.

Making the school a good machine by saving time in the mechanical operations that are necessary in school work.

SCHOOL HYGIENE AND SANITATION.

1464. **Broadhurst, Jean.** Home and community hygiene; a text-book of personal and public health. Philadelphia and London, J. B. Lippincott company [1918] xiii, 428 p. illus. 8°. (Lippincott's home manuals, ed. by B. R. Andrews)

A book intended specially for the student of household administration, and the student of nursing, but which appeals also to the general reader. Among the chapter headings are the following: Schools, p. 255–72; Mental hygiene, p. 320–27; Health education, p. 366–74.

PHYSICAL TRAINING.

1465. **Briggs, Le Baron R.** Intercollegiate athletics and the war. Atlantic monthly, 122: 303–9, September, 1918.

Says that in the present crisis intercollegiate athletics, like America, will stand or fall according as they choose between luxury and simplicity, trickery and integrity, the senses and the spirit.

1466. **Hilderbrant, Edith L.** The educative value of physical education. Education, 39: 1–10, September, 1918.

1467. **Pagliani, Luigi.** Urgenti riforme nell' insegnamento dell' educazione fisica nelle scuole magistrali. Nuova antologia, 195: 279–87, June 1, 1918.

1468. **Small, W. S.** Physical education in the high school in the present emergency. School and society, 8: 282–85, September 7, 1918.

Address before the Department of secondary education, National education association, July 2, 1918.

Gives a program for physical education in the high schools.

1469. **Y. M. C. A.** Physical directors' society. [Conference held Springfield, Mass., June, 1918.] Physical training, 15: 337–466, June, 1918.

Contains: 1. M. I. Foss: The physical directorship as a life calling, p. 405–17. 2. J. F. Enberg: Physical training in Denmark, p. 421–29. 3. T. A. Storey: State legislation for physical training, p. 430–46. 4. W. S. Small: Federal legislation for physical training, p. 447–52.

SOCIAL ASPECTS OF EDUCATION.

1470. **Leo,** *Brother*. The outside-of-school environment. Catholic school journal, 18: 155–56, September, 1918.

Deals particularly with the effect of environment on the English of school children.

1471. **Robb, Samuel J.** Education. Give him a chance. America, 19: 535–36, September 7, 1918.

Blames parents for the present-day lack of appreciation of mental training. Condemns the practice of leaving the choice of remaining in school to the immature judgment of a youth of fourteen.

Toops, Herbert A., *and* Pintner, Rudolf. Variability of the education of unemployed men. Journal of applied psychology, 2: 207–18, September, 1918.

Shows that education, wages, and industrial success depend in a large degree upon intellectual ability of the man.

CHILD WELFARE.

American association for the study and prevention of infant mortality. Transactions of the eighth annual meeting, Richmond, October 15–17, 1917. Baltimore, Press of Franklin printing company, 1918. 4 pts. 8°. (Gertrude B. Knipp, secretary, 1211 Cathedral St., Baltimore, Md.)

Contains: Pt. II.—1. Alice Ravenhill: The education of college and university women for giving instruction in the care of infants, children, and mothers, p. 168–70. 2. Mary H. Mayer: Extension courses in public schools for adult women in the care and feeding of children, p. 171–74; Discussion, p. 174–81.

MORAL AND RELIGIOUS EDUCATION.

Community schools for the training of religious leaders. Bulletin issued at Boston by Joint committee of Massachusetts council of religious education and Committee on education of the Massachusetts Sunday school association. August, 1918. 20 p. 8°.

Joint committee's educational director: George A. Goodridge, 72 Mt. Vernon Street, Boston, Mass.

Engleman, J. O. Moral education in school and home. Chicago, New York [etc.] B. H. Sanborn & co., 1918. xiv, 314 p. 12°.

MANUAL AND VOCATIONAL TRAINING.

Bryan, William Lowe. The trap. Michigan alumnus, 24: 588–93, August, 1918.

Address made at the commencement exercises of the University of Michigan. Speaks of the danger of vocational education leading a boy into an occupational trap. A defense for the study of the liberal arts that we may be kept young and plastic and able to escape the traps that lie in wait for us.

Buchanan, J. Y. Drawing and manual training in Punjab schools. Calcutta, Superintendent printing, India, 1918. 24 p. plates, diagrs. 8°. (India. Bureau of education. Pamphlet no. 1.)

Massey, Robert. Pre-vocational education. School (Toronto) 7: 43–48, September, 1918.

An account of the work of the Victoria pre-vocational school of Calgary, Canada, by its principal.

Munroe, James Phinney. Readjustment of the school from the viewpoint of the manufacturer. Journal of education, 88: 199–201, September 5, 1918.

Address at the Pittsburgh meeting of the National education association. What the manufacturers are going to demand of the schools and methods of cooperation between schools and industry.

Prosser, C. A. War work in vocational education. Annals of the American academy of political and social science, 79: 263–70, September, 1918.

Describes projected activities of the Federal board for vocational education.

Snedden, David. The birth and childhood of vocational education with a forecast of its development during adolescence. Educational administration and supervision, 4: 261–70, May, 1918.

Address before the Department of rural and agricultural education of the National education association, Pittsburgh, July 4, 1918.

VOCATIONAL GUIDANCE.

1482. **Towne, Harriet E.** Some phases of vocational guidance work in the Lincoln public schools. Nebraska teachers, 21: 27–31, September, 1918.

Speaks particularly of the Junior civic league activities.

AGRICULTURAL EDUCATION.

1483. **Houston, David F.** The American system of agricultural education and research and its rôle in helping to win the war. Science, n. s., 48: 260–62, September 13, 1918.

Reprinted from Weekly news letter, Department of agriculture.

PROFESSIONAL EDUCATION.

1484. **Conference of theological schools.** Harvard university, August 13–16, 1918. [Proceedings] Harvard conference a milestone in Christian unity. Christian register (Boston) 97: 801–9, August 22, 1918.

This conference considered the problems of religion arising out of the war, especially the provision of an adequate supply of trained men for the ministry.

1485. **Howe, Eugene C.** Professional instruction in public health in the United States and Canada. American journal of public health, 8: 600–607, August, 1918.

Gives admission requirements, length of course, curriculum, etc., of special professional schools of public health.

1486. **Talbot, Eugene S.** Conservation of time in teaching dental students. Dental cosmos, 60: 772–74, September, 1918.

Proposes that dental schools follow the example of medical schools by adopting a 3 or 2 term yearly course, thereby curtailing the time of the students. Says that by this method a year and perhaps more time could be saved.

1487. The Vassar nursing-preparatory course: a new experiment in nursing education. American journal of nursing, 18: 1155–59, September, 1918.

An account of the nursing battalion of 430 graduates from 115 American colleges, gathered for professional training at Vassar college in 1918.

CIVIC EDUCATION.

1488. **Ellerbe, Paul L.** Education for citizenship. Outlook, 120: 64–65, September 11, 1918.

1489. **Judd, Charles H.** The teaching of civics. School review, 26: 511–32, September, 1918.

Address before the High-school conference of the University of Chicago, April 9, 1918.

Says that "civics and school work should be connected, not incidentally and at a few points, but fundamentally and throughout the school curriculum."

1490. A new educational venture. Nation, 107: 264–67, September 7, 1918.

An account of a novel type of school, for men and women, designed to collect and disseminate information about political, social and industrial conditions bearing on social and economic readjustment. Comments by Jacques Loeb, Ernst Freund, Carl Becker, Alexander Meiklejohn, and E. M. Friedman.

1491. **Oursler, Charles F.** What father teaches. American motherhood, 47: 156–59, September, 1918.

What fathers should teach their boys and girls about politics.

1492. **Prosser, C. A.** Training for citizenship through service. School and society, 8: 271–82, September 7, 1918.

Address before the Conference of state executives and directors of vocational education, Washington, July 13, 1918.

Concludes with a few suggestions regarding the scope of a plan of universal service for national well-being and security.

3. **Thomas, Calvin.** Making the melting-pot melt. Columbia university quarterly, 20: 214–24, July, 1918.

The training in patriotism at school and the Americanisation of the adult immigrant.

4. **Turkington, Grace A.** My country; a textbook in civics and patriotism for young Americans. Boston, New York [etc.] Ginn and company [1918] 394 p. illus. 12°.

AMERICANIZATION OF IMMIGRANTS.

5. **Krysto, Christina.** Bringing the world to our foreign-language soldiers. National geographic magazine, 34: 82–90, August, 1918. illus.

How a military training camp is solving a seemingly unsurmountable problem by using the Geographic.

The education of foreign-language soldiers at Camp Kearny, California.

6. **Paull, Charles H.** Americanization; a discussion of present conditions with recommendations for the teaching of non-Americans. [Syracuse, N. Y., The Solvay process co. printing department] 1918. 87 p. 12°.

This report of a survey undertaken for the Solvay process company of Syracuse in 1917 aims to show (1) existing conditions, not only within the industry but in connection with all other agencies in Americanisation work, (2) to show the relative merits of aims and methods at present in use; (3) to deduce certain fundamentals of education for non-Americans which will be of particular value in Solvay.

REEDUCATION OF WAR INVALIDS.

7. American journal of care for cripples, vol. 6, no. 1, March, 1918.

Contains: 1. H. E. Mock: Human conservation and reclamation, p. 5–10. 2. D. C. McMurtrie: The Red cross institute for crippled and disabled men; an American school of reeducation, p. 17–26. 3. J. P. Munroe: The war's crippled; how they may be made assets both to themselves and to society, p. 27–32. 4. The care and training of blinded soldiers and sailors; the work of St. Dunstan's hostel, Regent's Park, London, England, p. 41–46. 5. J. C. Faries: The development in England of a state system for the care of the disabled soldier, p. 99–114. 6. J. C. Faries: Training in English technical schools for disabled soldiers, p. 115–24. 7. Gustave Hirschfeld: Tourvielle; a trade school for war cripples, p. 125–35. 8. J. Breuil: The vocational school for disabled soldiers at Rouen, France, p. 136–44. 9. D. C. McMurtrie: A bibliography of the war cripple, p. 158–96.

8. **Blake, Clarence J.** Speech-reading for the war deaf. Volta review, 20: 557–60, September, 1918.

Rehabilitation of deaf soldiers.

9. **Canada. Parliament. House of commons. Special committee on returned soldiers.** Returned soldiers; proceedings of the special committee appointed to consider, inquire into and report upon the reception, treatment, care, training, and reeducation of the wounded, disabled and convalescent who have served in the Canadian expeditionary forces, and the provision of employment for those who have been honourably discharged, and the training and reeducation of those so discharged who are unable to engage in their former occupation. Comprising the evidence taken and statements submitted in connection therewith, February 7th to July 17th, 1917. Ottawa, J. de L. Taché, 1917. xxxviii, 1262 p. plates, fold. form. 4°.

Includes the reports and proceedings of a committee composed of nine members of the House of commons and called the Special committee of the House of commons on returned soldiers.

Sir Herbert Ames, chairman.

1500. **Goodnow, Minnie.** The nurse's part in the soldier's reeducation. Trained nurse and hospital review, 61: 138–42, September, 1918.

1501. **Greener, George C.** Some aspects of rehabilitation work for disabled soldiers. Industrial-arts magazine, 7: 325–30, September, 1918. illus.

1502. **Harper, Grace S.** Vocational reeducation for war cripples in France. New York city, The Red cross institute for crippled and disabled men, 1918. 98 p. plates. 8°. (Publications of the Red cross institute for crippled and disabled men, ed. by D. C. McMurtrie. Series 2, no. 1)

1503. **Harris, Garrard.** Gardening for reeducating disabled soldiers. Garden magazine, 28: 45–46, September, 1918. illus.

Curative value of the work amply demonstrated in European hospitals and reconstruction centers—plans comprehensive developing for over here.

1504. **Lakeman, Curtis E.** The after-care of our disabled soldiers and sailors. Annals of the American academy of political and social science, 79: 114–29, September, 1918.

1505. Making the maimed whole. What our wounded soldiers can learn from disabled men who have been educated for efficiency. Outlook, 120: 54–57, September, 1918.

A symposium on the rehabilitation of wounded soldiers.

1506. **Red cross institute for crippled and disabled men.** Publications. Series 1, no. 12–15. New York city, The Red cross institute for crippled and disabled men, 1918. 4v. 4°.

12. Ruth Underhill: Provision for war cripples in Italy. 18 p.
13. Ruth Underhill: Provision for war cripples in Germany. 45 p.
14. Gladys Gladding Whiteside: Provision for vocational reeducation of disabled soldiers in France. 29 p.
15. Gladys Gladding Whiteside: Provision for the reeducation of Belgian war cripples. 11 p.

1507. **Stern, Rose Goldsmith.** Our deafened soldiers; a problem of the near future. Survey, 40: 627–30, September 7, 1918.

EDUCATION OF WOMEN.

1508. **Davis, Katherine B.** Women's education in social hygiene. Annals of the American academy of political and social science, 79: 167–77, September, 1918.

Work of the section on women's work of the social hygiene division of the Commission on training camp activities.

1509. **Wallich, V.** L'éducation par l'université. Revue universitaire, 27: 20–31, June, 1918.

An address to the students of the normal school for women at Sevres. The speaker shows how French women may promote a form of education which will arrest the progress of depopulation in France.

NEGRO EDUCATION.

1510. **Oldham, J. H.** Hollis B. Frissell and Hampton. Constructive quarterly, 6: 569–76, September, 1918.

1511. **University commission on southern race questions.** Minutes [1912–17] [n. p., 1918?] 75 p. plates, ports. 8°.

Secretary of commission: W. M. Hunley, Box 722, Lexington, Va.

EXCEPTIONAL CHILDREN.

1512. **Andrews, Harriet U.** A little cruise among the deaf. Boston and elsewhere. Volta review, 20: 563–68, September, 1918.

Second paper of series. Running comments on schools and teachers of the deaf.

. **Drummond, Margaret.** Number teaching. Child (London) 8: 509–16, August, 1918.

Lays emphasis on teaching numbers to backward children.

EDUCATION EXTENSION.

. **Cary, Elisabeth L.** The Metropolitan museum and education. American magazine of art, 9: 435–37, September, 1918.

LIBRARIES AND READING.

. **Berkey, J. M.** Correlation between libraries and schools. Pittsburgh school bulletin, 12: 331–37, 369–77, September, October, 1918.

Address before the Carnegie library school, February 23, 1918.

. **Hall, Mary E.** War service of high school libraries. Library journal, 43: 708–14, September, 1918.

Compiled by Miss Hall from material sent by fellow members of the committee on high-school libraries for the library department of the National education association, 1918.

. **Hitt, Eleanor.** Library service for the child of elementary school age. Western journal of education, 24: 3–4, August, 1918.

Written from the standpoint of the librarian.

. **Lewis, William Draper.** Instruction in literature. Pennsylvania school journal, 67: 66–70, August, 1918.

Deals particularly with the establishment of reading habits among children.

. Standard library organization and equipment for accredited secondary schools of different sizes. North central association of colleges and secondary schools. [Chicago? 1918] 43 p. 8°.

This report was adopted by the North central association of colleges and secondary schools at its Chicago meeting, March 21–24, 1918; also by the National education association, at Pittsburgh, July, 1918. It was prepared for the Commission on unit courses and curricula by C. C. Certain, Cass technical high school, Detroit, Mich., as chairman of Committee on library organization and equipment.

Reviewed by Mary E. Hall and Mabel Williams in Library journal, September, 1918, p. 680–82.

BUREAU OF EDUCATION: RECENT PUBLICATIONS.

. Americanization bulletin, vol. 1, no. 1, September 15, 1918. Probably twice a month.

. Lessons in community and national life. Series B, for the first class of the high school and the upper grades of the elementary school. Washington, 1918. 264 p.

. Lessons in community and national life. Series C, for the intermediate grades of the elementary school. Washington, 1918. 264 p.

. Liberty day, October 12, 1918. Suggestions for community celebrations, by Henry E. Jackson and Clara L. Van Slyck. Washington, 1918. 31 p.

. Sciency teaching in secondary schools in the war emergency. Washington, 1918. 19 p. (Secondary school circular no. 3, September, 1918.)

. Suggestions for a program for fire prevention day. Prepared for the Bureau of Education by the national board of fire underwriters. Designed for use in schoolrooms upon Friday, November 1, 1918. 12 p. (Teachers' leaflet no. 6, October, 1918.)

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 35

CARDINAL PRINCIPLES OF SECONDARY EDUCATION

A REPORT OF THE COMMISSION ON THE REORGANIZATION OF SECONDARY EDUCATION, APPOINTED BY THE NATIONAL EDUCATION ASSOCIATION

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REPORTS OF THE COMMISSION ON THE REORGANIZATION OF SECONDARY EDUCATION.

The following reports of the commission have been issued as bulletins of the United States Bureau of Education and may be procured from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices stated. Remittance should be made in coin or money order. Other reports of the commission are in preparation.

1913, No. 41. The Reorganization of Secondary Education. Contains preliminary statements by the chairmen of committees. 10 cents.
1915, No. 23. The Teaching of Community Civics. 10 cents.
1916, No. 28. The Social Studies in Secondary Education. 10 cents.
1917, No. 2. Reorganization of English in Secondary Schools. 20 cents.
1917, No. 49. Music in Secondary Schools. 5 cents.
1917, No. 50. Physical Education in Secondary Schools. 5 cents.
1917, No. 51. Moral Values in Secondary Education. 5 cents.
1918, No. 19. Vocational Guidance in Secondary Schools. 5 cents.
1918, No. 35. Cardinal Principles of Secondary Education. 5 cents.

PREFACE.

The Commission on the Reorganization of Secondary Education presents herewith the cardinal principles which, in the judgment of its reviewing committee, should guide the reorganization and development of secondary education in the United States.

The commission was the direct outgrowth of the work of the committee on the articulation of high school and college, which submitted its report to the National Education Association in 1911. That committee set forth briefly its conception of the field and function of secondary education and urged the modification of college entrance requirements in order that the secondary school might adapt its work to the varying needs of its pupils without closing to them the possibility of continued education in higher institutions. It took the position that the satisfactory completion of any well-planned high-school curriculum should be accepted as a preparation for college. This recommendation accentuated the responsibility of the secondary school for planning its work so that young people may meet the needs of democracy.

Through 16 of its committees the commission is issuing reports dealing with the organization and administration of secondary schools, and with the aims, methods, and content of the various studies. To assist these committees through constructive criticism, a reviewing committee was organized in 1913. Besides conducting continuous correspondence, that committee has each year held one or two meetings of from one to six days' duration, at which reports of the various committees were discussed from many points of view, and as a result some of the reports have been revised and rewritten several times. In addition to its task of criticizing reports, it seemed desirable that the reviewing committee itself should outline in a single brief report those fundamental principles that would be most helpful in directing secondary education. In its desire to determine the principles that are most significant and to set them forth adequately, the reviewing committee has been three years in formulating and revising the report which is presented in this bulletin.

The reports already issued by seven committees and listed on the last page of this bulletin are, for the most part, in fundamental agreement with the principles herein set forth.

The translation of these cardinal principles into daily practice will of necessity call for continued study and experiment on the part of the administrative officers and teachers in secondary schoools.

Clarence D. Kingsley,
Chairman of the Commission.

THE REVIEWING COMMITTEE OF THE COMMISSION ON THE REORGANIZATION OF SECONDARY EDUCATION.

(The Reviewing Committee consists of 26 members, of whom 16 are chairmen of committees and 10 are members at large.)

Chairman of the Commission and of the Reviewing Committee:

Clarence D. Kingsley, State high-school supervisor, Boston, Mass.

Members at large:

Hon. P. P. Claxton, United States Commissioner of Education, Washington, D. C.

Thomas H. Briggs, associate professor of education, Teachers College, Columbia University, New York City.

Alexander Inglis, assistant professor of education, in charge of secondary education, Harvard University, Cambridge, Mass.

Henry Neumann, Ethical Culture School, New York City.

William Orr, senior educational secretary, international Y. M. C. A. committee, 104 East Twenty-eighth Street, New York City.

William B. Owen, principal Chicago Normal College, Chicago, Ill.

Edward O. Sisson, president University of Montana, Missoula, Mont.

Joseph S. Stewart, professor of secondary education, University of Georgia, Athens, Ga.

Milo H. Stuart, principal Technical High School, Indianapolis, Ind.

H. L. Terry, State high-school supervisor, Madison, Wis.

Chairmen of Committees:

Organization and Administration of Secondary Education—Charles Hughes Johnston, professor of secondary education, University of Illinois, Urbana, Ill.[1]

Agriculture—A. V. Storm, professor of agricultural education, University of Minnesota, St. Paul, Minn.

Art Education—Henry Turner Bailey, dean, Cleveland School of Art, Cleveland, Ohio.

Articulation of High School and College—Clarence D. Kingsley, State high-school inspector, Boston, Mass.

Business Education—Cheesman A. Herrick, president, Girard College, Philadelphia, Pa.

Classical Languages—Walter Eugene Foster, Stuyvesant High School, New York City.

English—James Fleming Hosic, Chicago Normal College, Chicago, Ill.

Household Arts—Mrs. Henrietta Calvin, United States Bureau of Education, Washington, D. C.

Industrial Arts—Wilson H. Henderson, extension division, University of Wisconsin, Milwaukee, Wis. (now Major, Sanitary Corps, War Department, U. S. A.)

Mathematics—William Heard Kilpatrick, associate professor of education, Teachers College, Columbia University, New York City.

Modern Languages—Edward Manley, Englewood High School, Chicago, Ill.

Music—Will Earhart, director of music, Pittsburgh, Pa.

Physical Education—James H. McCurdy, director of normal courses of physical education, International Y. M. C. A. College, Springfield, Mass. (now in France, in charge of Y. M. C. A. recreation work).

Sciences—Otis W. Caldwell, director, Lincoln School, and professor of education, Teachers College, Columbia University, New York City.

Social Studies—Thomas Jesse Jones, United States Bureau of Education, Washington, D. C.

Vocational Guidance—Frank M. Leavitt, associate superintendent of schools, Pittsburgh, Pa.

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[1] Deceased, Sept. 4, 1917.

CARDINAL PRINCIPLES OF SECONDARY EDUCATION.

I. THE NEED FOR REORGANIZATION.

Secondary education should be determined by the needs of the society to be served, the character of the individuals to be educated, and the knowledge of educational theory and practice available. These factors are by no means static. Society is always in process of development; the character of the secondary-school population undergoes modification; and the sciences on which educational theory and practice depend constantly furnish new information. Secondary education, however, like any other established agency of society, is conservative and tends to resist modification. Failure to make adjustments when the need arises leads to the necessity for extensive reorganization at irregular intervals. The evidence is strong that such a comprehensive reorganization of secondary education is imperative at the present time.

1. *Changes in society.*—Within the past few decades changes have taken place in American life profoundly affecting the activities of the individual. As a citizen, he must to a greater extent and in a more direct way cope with problems of community life, State and National Governments, and international relationships. As a worker, he must adjust himself to a more complex economic order. As a relatively independent personality, he has more leisure. The problems arising from ~~these three~~ dominant phases of life are closely interrelated and call for a degree of intelligence and efficiency on the part of every citizen that can not be secured through elementary education alone, or even through secondary education unless the scope of that education is broadened.

The responsibility of the secondary school is still further increased
because many social agencies other than the school affor
ulus for education than heretofore. In many vocations thout the
come such significant changes as the substitution of the f ts, ideals,
tem for the domestic system of industry; the use of ma place to
place of manual labor; the high specialization of processes
corresponding subdivision of labor; and the breakdown of t
prentice system. In connection with home and family life ha luca-
quently come lessened responsibility on the part of the childr the
withdrawal of the father and sometimes the mother from ho nal
cupations to the factory or store; and increased urbanization, r

ing in less unified family life. Similarly, many important changes have taken place in community life, in the church, in the State, and in other institutions. These changes in American life call for extensive modifications in secondary education.

2. *Changes in the secondary-school population.*—In the past 25 years there have been marked changes in the secondary-school population of the United States. The number of pupils has increased, according to Federal returns, from one for every 210 of the total population in 1889–90, to one for every 121 in 1899–1900, to one for every 89 in 1909–10, and to one for every 73 of the estimated total population in 1914–15. The character of the secondary-school population has been modified by the entrance of large numbers of pupils of widely varying capacities, aptitudes, social heredity, and destinies in life. Further, the broadening of the scope of secondary education has brought to the school many pupils who do not complete the full course but leave at various stages of advancement. The needs of these pupils can not be neglected, nor can we expect in the near future that all pupils will be able to complete the secondary school as full-time students.

At present only about one-third of the pupils who enter the first year of the elementary school reach the four-year high school, and only about one in nine is graduated. Of those who enter the seventh school year, only one-half to two-thirds reach the first year of the four-year high school. Of those who enter the four-year high school about one-third leave before the beginning of the second year, about one-half are gone before the beginning of the third year, and fewer than one-third are graduated. These facts can no longer be safely ignored.

3. *Changes in educational theory.*—The sciences on which educational theory depends have within recent years made significant contributions. In particular, educational psychology emphasizes the following factors:

(*a*) *Individual differences in capacities and aptitudes among secondary-school pupils.* Already recognized to some extent, this factor merits fuller attention.

Moder *reexamination and reinterpretation of subject values and*
Music *ng methods with reference to "general discipline."*—While
Physi
ph verdict of modern psychology has not as yet been rendered,
ar that former conceptions of "general values" must be thor-
y revised.

Importance of applying knowledge.—Subject values and
ng methods must be tested in terms of the laws of learning and
pplication of knowledge to the activities of life, rather than
arily in terms of the demands of any subject as a logically or-
zed science.

(*d*) *Continuity in the development of children.*—It has long been held that psychological changes at certain stages are so pronounced as to overshadow the continuity of development. On this basis secondary education has been sharply separated from elementary education. Modern psychology, however, goes to show that the development of the individual is in most respects a continuous process and that, therefore, any sudden or abrupt break between the elementary and the secondary school or between any two successive stages of education is undesirable.

The foregoing changes in society, in the character of the secondary-school population, and in educational theory, together with many other considerations, call for extensive modifications of secondary education. Such modifications have already begun in part. The present need is for the formulation of a comprehensive program of reorganization, and its adoption, with suitable adjustments, in all the secondary schools of the Nation. Hence it is appropriate for a representative body like the National Education Association to outline such a program. This is the task entrusted by that association to the Commission on the Reorganization of Secondary Education.

II. THE GOAL OF EDUCATION IN A DEMOCRACY.

Education in the United States should be guided by a clear conception of the meaning of democracy. It is the ideal of democracy that the individual and society may find fulfillment each in the other. Democracy sanctions neither the exploitation of the individual by society, nor the disregard of the interests of society by the individual. More explicitly—

The purpose of democracy is so to organize society that each member may develop his personality primarily through activities designed for the well-being of his fellow members and of society as a whole.

This ideal demands that human activities be placed upon a high level of efficiency; that to this efficiency be added an appreciation of the significance of these activities and loyalty to the best ideals involved; and that the individual choose that vocation and those forms of social service in which his personality may develop and become most effective. For the achievement of these ends democracy must place chief reliance upon education.

Consequently, education in a democracy, both within and without the school, should develop in each individual the knowledge, interests, ideals, habits, and powers whereby he will find his place and use that place to shape both himself and society toward ever nobler ends.

III. THE MAIN OBJECTIVES OF EDUCATION.

In order to determine the main objectives that should guide education in a democracy it is necessary to analyze the activities of the individual. Normally he is a member of a family, of a vocational group, and of various civic groups, and by virtue of these relationships he is called upon to engage in activities that enrich the family life, to render important vocational services to his fellows, and to promote the common welfare. It follows, therefore, that worthy home-membership, vocation, and citizenship, demand attention as three of the leading objectives.

Aside from the immediate discharge of these specific duties, every individual should have a margin of time for the cultivation of personal and social interests. This leisure, if worthily used, will recreate his powers and enlarge and enrich life, thereby making him better able to meet his responsibilities. The unworthy use of leisure impairs health, disrupts home life, lessens vocational efficiency, and destroys civic-mindedness. The tendency in industrial life, aided by legislation, is to decrease the working hours of large groups of people. While shortened hours tend to lessen the harmful reactions that arise from prolonged strain, they increase, if possible, the importance of preparation for leisure. In view of these considerations, education for the worthy use of leisure is of increasing importance as an objective.

To discharge the duties of life and to benefit from leisure, one must have good health. The health of the individual is essential also to the vitality of the race and to the defense of the Nation. Health education is, therefore, fundamental.

There are various processes, such as reading, writing, arithmetical computations, and oral and written expression, that are needed as tools in the affairs of life. Consequently, command of these fundamental processes, while not an end in itself, is nevertheless an indispensable objective.

And, finally, the realization of the objectives already named is dependent upon ethical character, that is, upon conduct founded upon right principles, clearly perceived and loyally adhered to. Good citizenship, vocational excellence, and the worthy use of leisure go hand in hand with ethical character; they are at once the fruits of sterling character and the channels through which such character is developed and made manifest. On the one hand, character is meaningless apart from the will to discharge the duties of life, and, on the other hand, there is no guarantee that these duties will be rightly discharged unless principles are substituted for impulses, however well-intentioned such impulses may be. Consequently ethical character is at once involved in all the other objectives and at the same time requires specific consideration in any program of national education.

This commission, therefore, regards the following as the main objectives of education: 1. Health. 2. Command of fundamental processes. 3. Worthy home-membership. 4. Vocation. 5. Citizenship. 6. Worthy use of leisure. 7. Ethical character.

The naming of the above objectives is not intended to imply that the process of education can be divided into separated fields. This can not be, since the pupil is indivisible. Nor is the analysis all-inclusive. Nevertheless, we believe that distinguishing and naming these objectives will aid in directing efforts; and we hold that they should constitute the principal aims in education.

IV. THE RÔLE OF SECONDARY EDUCATION IN ACHIEVING THESE OBJECTIVES.

The objectives outlined above apply to education as a whole—elementary, secondary, and higher. It is the purpose of this section to consider specifically the rôle of secondary education in achieving each of these objectives.

For reasons stated in Section X, this commission favors such reorganization that secondary education may be defined as applying to all pupils of approximately 12 to 18 years of age.

1. *Health.*—Health needs can not be neglected during the period of secondary education without serious danger to the individual and the race. The secondary school should therefore provide health instruction, inculcate health habits, organize an effective program of physical activities, regard health needs in planning work and play, and cooperate with home and community in safe-guarding and promoting health interests.

To carry out such a program it is necessary to arouse the public to recognize that the health needs of young people are of vital importance to society, to secure teachers competent to ascertain and meet the needs of individual pupils and able to inculcate in the entire student body a love for clean sport, to furnish adequate equipment for physical activities, and to make the school building, its rooms and surroundings, conform to the best standards of hygiene and sanitation.[1]

2. *Command of fundamental processes.*—Much of the energy of the elementary school is properly devoted to teaching certain fundamental processes, such as reading, writing, arithmetical computations, and the elements of oral and written expression. The facility that a child of 12 or 14 may acquire in the use of these tools is not sufficient for the needs of modern life. This is particularly true of the mother tongue. Proficiency in many of these processes may be increased more effectively by their application to new material than by the formal reviews commonly employed in grades seven and eight.

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[1] For the outlines of a health program, see a report of this commission issued by the Bureau of Education as Bulletin, 1917, No. 50, "Physical Education in Secondary Schools."

Throughout the secondary school, instruction and practice must go hand in hand, but as indicated in the report of the committee on English,[1] only so much theory should be taught at any one time as will show results in practice.

3. *Worthy home-membership.*—Worthy home-membership as an objective calls for the development of those qualities that make the individual a worthy member of a family, both contributing to and deriving benefit from that membership.

This objective applies to both boys and girls. The social studies should deal with the home as a fundamental social institution and clarify its relation to the wider interests outside. Literature should interpret and idealize the human elements that go to make the home. Music and art should result in more beautiful homes and in greater joy therein. The coeducational school with a faculty of men and women should, in its organization and its activities, exemplify wholesome relations between boys and girls and men and women.

Home membership as an objective should not be thought of solely with reference to future duties. These are the better guaranteed if the school helps the pupils to take the right attitude toward present home responsibilities and interprets to them the contribution of the home to their development.

In the education of every high-school girl, the household arts should have a prominent place because of their importance to the girl herself and to others whose welfare will be directly in her keeping. The attention now devoted to this phase of education is inadequate, and especially so for girls preparing for occupations not related to the household arts and for girls planning for higher institutions. The majority of girls who enter wage-earning occupations directly from the high school remain in them for only a few years, after which home making becomes their lifelong occupation. For them the high-school period offers the only assured opportunity to prepare for that lifelong occupation, and it is during this period that they are most likely to form their ideals of life's duties and responsibilities. For girls planning to enter higher institutions—

> our traditional ideals of preparation for higher institutions are particularly incongruous with the actual needs and future responsibilities of girls. It would seem that such high-school work as is carefully designed to develop capacity for, and interest in, the proper management and conduct of a home should be regarded as of importance at least equal to that of any other work. We do not understand how society can properly continue to sanction for girls high-school curriculums that disregard this fundamental need, even though such curriculums are planned in response to the demands made by some of the colleges for women.[2]

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[1] Bureau of Education, Bulletin, 1917, No. 2, "Reorganization of English in Secondary Schools."

[2] Report of the Committee on the Articulation of High School and College, 1911.

In the education of boys, some opportunity should be found to give them a basis for the intelligent appreciation of the value of the well-appointed home and of the labor and skill required to maintain such a home, to the end that they may cooperate more effectively. For instance, they should understand the essentials of food values, of sanitation, and of household budgets.

4. *Vocation.*—Vocational education should equip the individual to secure a livelihood for himself and those dependent on him, to serve society well through his vocation, to maintain the right relationships toward his fellow workers and society, and, as far as possible, to find in that vocation his own best development.

This ideal demands that the pupil explore his own capacities and aptitudes, and make a survey of the world's work, to the end that he may select his vocation wisely. Hence, an effective program of vocational guidance in the secondary school is essential.[1]

Vocational education should aim to develop an appreciation of the significance of the vocation to the community, and a clear conception of right relations between the members of the chosen vocation, between different vocational groups, between employer and employee, and between producer and consumer. These aspects of vocational education, heretofore neglected, demand emphatic attention.

The extent to which the secondary school should offer training for a specific vocation depends upon the vocation, the facilities that the school can acquire, and the opportunity that the pupil may have to obtain such training later. To obtain satisfactory results those proficient in that vocation should be employed as instructors and the actual conditions of the vocation should be utilized either within the high school or in cooperation with the home, farm, shop, or office. Much of the pupil's time will be required to produce such efficiency.

5. *Civic education* should develop in the individual those qualities whereby he will act well his part as a member of neighborhood, town or city, State, and Nation, and give him a basis for understanding international problems.

For such citizenship the following are essential: A many-sided interest in the welfare of the communities to which one belongs; loyalty to ideals of civic righteousness; practical knowledge of social agencies and institutions; good judgment as to means and methods that will promote one social end without defeating others; and as putting all these into effect, habits of cordial cooperation in social undertakings.

The school should develop the concept that the civic duties of men and women, while in part identical, are also in part supplementary.

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[1] For a comprehensive program of vocational guidance see a report of this commission issued as Bureau of Education Bulletin, 1918, No. 19, "Vocational Guidance in Secondary Schools."

Differentiation in civic activities is to be encouraged, but not to the extent of loss of interest in the common problems with which all should cope.

Among the means for developing attitudes and habits important in a democracy are the assignment of projects and problems to groups of pupils for cooperative solution and the socialized recitation whereby the class as a whole develops a sense of collective responsibility. Both of these devices give training in collective thinking. Moreover, the democratic organization and administration of the school itself, as well as the cooperative relations of pupil and teacher, pupil and pupil, and teacher and teacher, are indispensable.

While all subjects should contribute to good citizenship, the social studies—geography, history, civics, and economics—should have this as their dominant aim. Too frequently, however, does mere information, conventional in value and remote in its bearing, make up the content of the social studies. History should so treat the growth of institutions that their present value may be appreciated. Geography should show the interdependence of men while it shows their common dependence on nature. Civics should concern itself less with constitutional questions and remote governmental functions, and should direct attention to social agencies close at hand and to the informal activities of daily life that regard and seek the common good. Such agencies as child-welfare organizations and consumers' leagues afford specific opportunities for the expression of civic qualities by the older pupils.

The work in English should kindle social ideals and give insight into social conditions and into personal character as related to these conditions. Hence the emphasis by the committee on English on the importance of a knowledge of social activities, social movements, and social needs on the part of the teacher of English.

The comprehension of the ideals of American democracy and loyalty to them should be a prominent aim of civic education. The pupil should feel that he will be responsible, in cooperation with others, for keeping the Nation true to the best inherited conceptions of democracy, and he should also realize that democracy itself is an ideal to be wrought out by his own and succeeding generations.

Civic education should consider other nations also. As a people we should try to understand their aspirations and ideals that we may deal more sympathetically and intelligently with the immigrant coming to our shores, and have a basis for a wiser and more sympathetic approach to international problems. Our pupils should learn that each nation, at least potentially, has something of worth to contribute to civilization and that humanity would be incomplete without that contribution. This means a study of specif·
ondary
nations, their achievements and possibilities, not ignoring th
tations. Such a study of dissimilar contributions in the li ·11.

ideal of human brotherhood should help to establish a genuine internationalism, free from sentimentality, founded on fact, and actually operative in the affairs of nations.[1]

6. *Worthy use of leisure.*—Education should equip the individual to secure from his leisure the re-creation of body, mind, and spirit, and the enrichment and enlargement of his personality.

This objective calls for the ability to utilize the common means of enjoyment, such as music, art, literature, drama, and social intercourse, together with the fostering in each individual of one or more special avocational interests.

Heretofore the high school has given little conscious attention to this objective. It has so exclusively sought intellectual discipline that it has seldom treated literature, art, and music so as to evoke right emotional response and produce positive enjoyment. Its presentation of science should aim, in part, to arouse a genuine appreciation of nature.

The school has failed also to organize and direct the social activities of young people as it should. One of the surest ways in which to prepare pupils worthily to utilize leisure in adult life is by guiding and directing their use of leisure in youth. The school should, therefore, see that adequate recreation is provided both within the school and by other proper agencies in the community. The school, however, has a unique opportunity in this field because it includes in its membership representatives from all classes of society and consequently is able through social relationships to establish bonds of friendship and common understanding that can not be furnished by other agencies. Moreover, the school can so organize recreational activities that they will contribute simultaneously to other ends of education, as in the case of the school pageant or festival.

7. *Ethical character.*—In a democratic society ethical character becomes paramount among the objectives of the secondary school. Among the means for developing ethical character may be mentioned the wise selection of content and methods of instruction in all subjects of study, the social contacts of pupils with one another and with their teachers, the opportunities afforded by the organization and administration of the school for the development on the part of pupils of the sense of personal responsibility and initiative, and, above all, the spirit of service and the principles of true democracy which should permeate the entire school—principal, teachers, and pupils.

Specific consideration is given to the moral values to be obtained from the organization of the school and the subjects of study in the report of this commission entitled "Moral Values in Secondary

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[1] For a further discussion of civic education, see the reports of this commission on "The Teaching of Community Civics" and "Social Studies in Secondary Education," issued Bureau of Education Bulletins, 1915, No. 23, and 1916, No. 28, respectively.

Education."[1] That report considers also the conditions under which it may be advisable to supplement the other activities of the school by offering a distinct course in moral instruction.

V. INTERRELATION OF THE OBJECTIVES IN SECONDARY EDUCATION.

This commission holds that education is essentially a unitary and continuous process, and that each of the objectives defined above must be recognized throughout the entire extent of secondary education. Health needs are evidently important at all stages; the vocational purpose and content is coming properly to be recognized as a necessary and valuable ingredient even in the early stages and even when specific preparation is postponed; citizenship and the worthy use of leisure, obviously important in the earlier stages, involve certain phases of education that require maturity on the part of the pupil and hence are indispensable also in the later stages of secondary education.

Furthermore, it is only as the pupil sees his vocation in relation to his citizenship and his citizenship in the light of his vocation that he will be prepared for effective membership in an industrial democracy. Consequently, this commission enters its protest against any and all plans, however well intended, which are in danger of divorcing vocation and social-civic education. It stands squarely for the infusion of vocation with the spirit of service and for the vitalization of culture by genuine contact with the world's work.

VI. RECOGNITION OF THE OBJECTIVES IN REORGANIZING HIGH-SCHOOL SUBJECTS.

Each subject now taught in high schools is in need of extensive reorganization in order that it may contribute more effectively to the objectives outlined herein, and the place of that subject in secondary education should depend upon the value of such contribution. In Section IV of this report various references have been made to needed changes. For fuller treatment the reader is referred to reports of this commission dealing with the several subjects. These reports indicate important steps in such modifications. In each report the commission attempts to analyze the aims in terms of the objectives; to indicate the adaptation of methods of presentation to the aims accepted; and to suggest a selection of content on the basis of aims and methods.

VII. EDUCATION AS A PROCESS OF GROWTH.

Education must be conceived as a process of growth. Only when so conceived and so conducted can it become a preparation for life.

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[1] Bureau of Education Bulletin, 1917, No. 51.

In so far as this principle has been ignored, formalism and sterility have resulted.

For example, civic education too often has begun with topics remote from the pupil's experience and interest. Reacting against this formalism, some would have pupils study only those activities in which they can engage while young. This extreme, however, is neither necessary nor desirable. Pupils should be led to respond to present duties and, at the same time, their interest should be aroused in problems of adult life. With this interest as a basis, they should be helped to acquire the habits, insight, and ideals that will enable them to meet the duties and responsibilities of later life. Similarly in home-making education, to neglect present duties and responsibilities toward the family of which the pupil is now a member, is to court moral insincerity and jeopardize future right conduct. With present duties as a point of departure, home-making education should arouse an interest in future home-making activities and with that interest as a basis give the training necessary.

VIII. NEED FOR EXPLICIT VALUES.

The number of years that pupils continue in school beyond the compulsory school age depends in large measure upon the degree to which they and their parents realize that school work is worth while for them and that they are succeeding in it. Probably in most communities doubt regarding the value of the work offered causes more pupils to leave school than economic necessity. Consequently, it is important that the work of each pupil should be so presented as to convince him and his parents of its real value.

IX. SUBORDINATION OF DEFERRED VALUES.

Many subjects are now so organized as to be of little value unless the pupil studies them for several years. Since a large proportion of pupils leave school in each of the successive years, each subject should be so organized that the first year of work will be of definite value to those who go no further; and this principle should be applied to the work of each year. Courses planned in accordance with this principle will deal with the simpler aspects, or those of more direct application, in the earlier years and will defer the refinements for later years when these can be better appreciated. The course as a whole will then be better adapted to the needs both of those who continue and of those who drop out of school.

X. DIVISION OF EDUCATION INTO ELEMENTARY AND SECONDARY.

Individual differences in pupils and the varied needs of society alike demand that education be so varied as to touch the leading aspects of occupational, civic, and leisure life. To this end curriculums[1] must be organized at appropriate stages and the work of pupils progressively differentiated.

To accomplish this differentiation most wisely the pupil should be assisted ordinarily at about 12 or 13 years of age to begin a preliminary survey of the activities of adult life and of his own aptitudes in connection therewith, so that he may choose, at least tentatively, some field of human endeavor for special consideration. Following the period of preliminary survey and provisional choice, he should acquire a more intimate knowledge of the field chosen, including therewith an appreciation of its social significance. Those whose schooling ends here should attain some mastery of the technique involved. The field chosen will be for some as sharply defined as a specific trade; for others, it will be but the preliminary choice of a wider domain within which a narrower choice will later be made.

These considerations, reenforced by others, imply, in the judgment of this commission, a redivision of the period devoted to elementary and secondary education. The eight years heretofore given to elementary education have not, as a rule, been effectively utilized. The last two of these years in particular have not been well adapted to the needs of the adolescent. Many pupils lose interest and either drop out of school altogether or form habits of dawdling, to the serious injury of subsequent work. We believe that much of the difficulty will be removed by a new type of secondary education beginning at about 12 or 13. Furthermore, the period of four years now allotted to the high school is too short a time in which to accomplish the work above outlined.

We, therefore, recommend a reorganization of the school system whereby the first six years shall be devoted to elementary education designed to meet the needs of pupils of approximately 6 to 12 years of age; and the second six years to secondary education designed to meet the needs of pupils of approximately 12 to 18 years of age.

XI. DIVISION OF SECONDARY EDUCATION INTO JUNIOR AND SENIOR PERIODS.

The six years to be devoted to secondary education may well be divided into two periods which may be designated as the junior and senior periods. In the junior period emphasis should be placed upon the attempt to help the pupil to explore his own aptitudes and to make at least provisional choice of the kinds of work to which he will devote himself. In the senior period emphasis should be given to training in the fields thus chosen. This distinction lies at the basis of the organization of junior and senior high schools.

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[1] The term "curriculum" is used by this commission to designate a systematic arrangement of subjects, and courses in those subjects, both required and elective, extending through two or more years and designed for a group of pupils whose common aims and probable careers may properly differentiate a considerable part of their work from that of other groups in the school.

In the junior high school there should be the gradual introduction of departmental instruction, some choice of subjects under guidance, promotion by subjects, prevocational courses, and a social organization that calls forth initiative and develops the sense of personal responsibility for the welfare of the group.

In the senior high school a definite curriculum organization should be provided by means of which each pupil may take work systematically planned with reference to his needs as an individual and as a member of society. The senior high school should be characterized by a rapidly developing social consciousness and by an aptitude of self-reliance based upon clearly perceived objectives.

Under ordinary circumstances the junior and senior periods should each be three years in length so as to realize their distinctive purposes. In sparsely settled communities where a senior high school can not be maintained effectively, the junior high school may well be four years in length, so that the pupils may attend school nearer to their homes for one more year.

The commission is not unmindful of the desirability, when funds permit, of extending secondary education under local auspices so as to include the first two years of work usually offered in colleges, and constituting what is known as the "junior college," but it has seemed unwise for the commission to attempt to outline the work of this new unit.

XII. ARTICULATION OF SECONDARY EDUCATION WITH ELEMENTARY EDUCATION.

Admission to high school is now, as a rule, based upon the completion of a prescribed amount of academic work. As a result many over-age pupils either leave school altogether or are retained in the elementary school when they are no longer deriving much benefit from its instruction. Should a similar conception of the articulation of the two schools continue after the elementary program has been shortened to six years, similar bad results will persist. Experience in certain school systems, however, shows that the secondary school can provide special instruction for over-age pupils more successfully than the elementary school can. *Consequently we recommend that secondary schools admit, and provide suitable instruction for, all pupils who are in any respect so mature that they would derive more benefit from the secondary school than from the elementary school.*

XIII. ARTICULATION OF HIGHER EDUCATION WITH SECONDARY EDUCATION.

In view of the important rôle of secondary education in achieving the objectives essential in American life, it follows that higher institutions of learning are not justified in maintaining entrance requirements and examinations of a character that handicap the secondary school in discharging its proper functions in a democracy.

As stated in Section XII of this report, the secondary school should admit all pupils who would derive greater benefit from the secondary than from the elementary school. With the demand of democratic society for extended liberal and vocational education for an ever-increasing number of persons, the higher institutions of learning, taken as a whole, are under a similar obligation with reference to those whose needs are no longer met by the secondary school and are disposed to continue their education. The conception that higher education should be limited to the few is destined to disappear in the interests of democracy.

The tradition that a particular type of education, and that exclusively nonvocational in character, is the only acceptable preparation for advanced education, either liberal or vocational, must therefore give way to a scientific evaluation of all types of secondary education as preparation for continued study. This broader conception need not involve any curtailment of opportunities for those who early manifest academic interest to pursue the work adapted to their needs. It does, however, mean that pupils who, during the secondary period, devote a considerable time to courses having vocational content should be permitted to pursue whatever form of higher education, either liberal or vocational, they are able to undertake with profit to themselves and to society.

XIV. RECOGNITION OF THE OBJECTIVES IN PLANNING CURRICULUMS.

No curriculum in the secondary school can be regarded as satisfactory unless it gives due attention to each of the objectives of education outlined herein.

Health, as an objective, makes imperative an adequate time assignment for physical training and requires science courses properly focused upon personal and community hygiene, the principles of sanitation, and their applications. Command of fundamental processes necessitates thorough courses in the English language as a means of taking in and giving forth ideas. Worthy home-membership calls for the redirection of much of the work in literature, art, and the social studies. For girls it necessitates adequate courses in household arts. Citizenship demands that the social studies be given a prominent place. Vocation as an objective requires that many pupils devote much of their time to specific preparation for a definite trade or occupation, and that some pursue studies that serve as a basis for advanced work in higher institutions. The worthy use of leisure calls for courses in literature, art, music, and science so taught as to develop appreciation. It necessitates also a margin of free electives to be chosen on the basis of personal avocational interests.

Due recognition of these objectives will provide the elements of distribution and concentration which are recognized as essential for a well-balanced and effective education.

XV. THE SPECIALIZING AND UNIFYING FUNCTIONS OF SECONDARY EDUCATION.

1. *Their significance.*—The ideal of a democracy, as set forth in Section II of this report, involves, on the one hand, specialization whereby individuals and groups of individuals may become effective in the various vocations and other fields of human endeavor, and, on the other hand, unification whereby the members of that democracy may obtain those common ideas, common ideals, and common modes of thought, feeling, and action that make for cooperation, social cohesion, and social solidarity.

Without effective specialization on the part of groups of individuals there can be no progress. Without unification in a democracy there can be no worthy community life and no concerted action for necessary social ends. Increasing specialization emphasizes the need for unification, without which a democracy is a prey to enemies at home and abroad.

2. *The specializing function.*—Secondary education in the past has met the needs of only a few groups. The growing recognition that progress in our American democracy depends in no small measure upon adequate provision for specialization in many fields is the chief cause leading to the present reorganization of secondary education. Only through attention to the needs of various groups of individuals as shown by aptitudes, abilities, and aspirations can the secondary school secure from each pupil his best efforts. The school must capitalize the dominant interest that each boy and girl has at the time and direct that interest as wisely as possible. This is the surest method by which hard and effective work may be obtained from each pupil.

Specialization demands the following provisions in secondary education:

(*a*) *A wide range of subjects.*—In order to test and develop the many important capacities and interests found in pupils of secondary-school age, the school should provide as wide a range of subjects as it can offer effectively.

(*b*) *Exploration and guidance.*—Especially in the junior high school the pupil should have a variety of experience and contacts in order that he may explore his own capacities and aptitudes. Through a system of educational supervision or guidance he should be helped to determine his education and his vocation. These decisions should not be imposed upon him by others.

(*c*) *Adaptation of content and methods.*—The content and teaching methods of every study should be adapted to the capacities, interests, and needs of the pupils concerned. In certain studies these factors may differ widely for various groups of pupils, e. g., chemistry should emphasize different phases in agricultural, commercial, industrial, and household-arts curriculums.

(*d*) *Flexibility of organization and administration.*—Flexibility should be secured by "election" of studies or curriculum, promotion by subjects from the beginning of the junior high school, possible transfer from curriculum to curriculum, provision for maximum and minimum assignments for pupils of greater and less ability, and, under certain conditions, for the rapid or slow progress of such pupils.

(*e*) *Differentiated curriculums.*—The work of the senior high school should be organized into differentiated curriculums. The range of such curriculums should be as wide as the school can offer effectively. The basis of differentiation should be, in the broad sense of the term, vocational, thus justifying the names commonly given, such as agricultural, business, clerical, industrial, fine-arts, and household-arts curriculums. Provision should be made also for those having distinctively academic interests and needs. The conclusion that the work of the senior high school should be organized on the basis of curriculums does not imply that every study should be different in the various curriculums. Nor does it imply that every study should be determined by the dominant element of that curriculum. Indeed any such practice would ignore other objectives of education just as important as that of vocational efficiency.

3. *The unifying function.*—In some countries a common heredity, a strongly centralized government, and an established religion contribute to social solidarity. In America, racial stocks are widely diversified, various forms of social heredity come into conflict, differing religious beliefs do not always make for unification, and the members of different vocations often fail to recognize the interests that they have in common with others. The school is the one agency that may be controlled definitely and consciously by our democracy for the purpose of unifying its people. In this process the secondary school must play an important part because the elementary school with its immature pupils can not alone develop the common knowledge, common ideals, and common interests essential to American democracy. Furthermore, children of immigrant parents attend the secondary school in large and increasing numbers; secondary education comes at a stage in the development of boys and girls when social interests

develop rapidly; and from the secondary school the majority of pupils pass directly into participation in the activities of our society.

The unifying function calls for the following provisions in secondary education:

(*a*) Studies of direct value for this purpose, especially the social studies and the mother tongue, with its literature.

(*b*) The social mingling of pupils through the organization and administration of the school.

(*c*) The participation of pupils in common activities in which they should have a large measure of responsibility, such as athletic games, social activities, and the government of the school.

4. *Specialization and unification as supplementary functions.*—With increasing specialization in any society comes a corresponding necessity for increased attention to unification. So in the secondary school, increased attention to specialization calls for more purposeful plans for unification. When there was but little differentiation in the work within the secondary school, and the pupils in attendance were less diversified as to their heredity and interests, social unification in the full sense of the term could not take place.

The supplementary character of these functions has direct bearing upon the subjects to be taken by secondary-school pupils. To this end the secondary school should provide the following groups of studies:

(*a*) *Constants*, to be taken by all or nearly all pupils. These should be determined mainly by the objectives of health, command of fundamental processes, worthy home-membership, citizenship, and ethical character.

(*b*) *Curriculum variables*, peculiar to a curriculum or to a group of related curriculums. These should be determined for the most part by vocational needs, including, as they frequently do, preparation for advanced study in special fields.

(*c*) *Free electives*, to be taken by pupils in accordance with individual aptitudes or special interests, generally of a nonvocational nature. These are significant, especially in preparation for the worthy use of leisure.

The constants should contribute definitely to unification, the curriculum variables to specialization, and the free electives to either or both of these functions.

In the seventh year, that is the first year of the junior high school, the pupil should not be required to choose at the outset the field to which he will devote himself. For those who do not at this time have a definite purpose, opportunity should be given to gain some experience with several significant types of work, such as some form of industrial arts, gardening or other agricultural activity, typewriting or problems drawn from business, household arts for girls, and for at least a part of the pupils some work in a foreign language.

It may be found feasible to organize several such subjects or projects into short units and to arrange the schedule so that every pupil may take several of them. The work thus offered may and should be of real educational value, in addition to its exploratory value.

In the two following years of the junior high school, some pupils should continue this trying-out process, while others may well devote one-fourth to one-half of their time to curriculum variables. Pupils who will probably enter industry at the end of the ninth grade may well give as much as two-thirds of their time to vocational preparation, but they must not be permitted to neglect preparation for citizenship and the worthy use of leisure.

In the senior high school the relative proportion of these three groups of subjects will vary with the curriculum. Pupils who are to enter a gainful occupation before the completion of the senior high school may well devote a large proportion of their time to the curriculum variables, especially during their last year in school.

In brief, the greater the time allowed for curriculum variables, the more purposeful should be the time devoted to the constants in order that the school may be effective as an agency of unification. Above all, the greater the differentiation in studies, the more important becomes the social mingling of pupils pursuing different curriculums.

The supplementary character of the specializing and unifying functions has a direct bearing also upon the type of high school best suited to the needs of democratic society, as discussed in the next section.

XVI. THE COMPREHENSIVE HIGH SCHOOL AS THE STANDARD SECONDARY SCHOOL.

The comprehensive (sometimes called composite, or cosmopolitan) high school, embracing all curriculums in one unified organization, should remain the standard type of secondary school in the United States.

Junior high schools must be of the comprehensive type, whatever policy be adopted for the senior high schools, since one of the primary purposes of the junior high school is to assist the pupil through a wide variety of contacts and experiences to obtain a basis for intelligent choice of his educational and vocational career. In the judgment of the commission senior high schools and four-year high schools of the older organizations should, as a rule, be of the comprehensive type for the following reasons:

1. *For effectiveness of vocational education.*—When effectively organized and administered (see pp. 27 to 29) the comprehensive high school can make differentiated education of greater value to the individual and to society, for such value depends largely upon the extent to which the individual pursues the curriculum best suited

to his needs. This factor is of prime importance, although frequently ignored in discussions regarding the effectiveness of vocational and other types of differentiated education.

In a system of special-type schools many influences interfere with the wise choice of curriculum. Thus many pupils choose the high school nearest to their homes, or the school to which their friends have gone or are going, or the school that provides the most attractive social life or has the best athletic teams. Still others are unwisely influenced by the notions of neighbors and friends of the family. After entering a special-type school, many pupils drop out because the work is not adapted to their needs, while comparatively few transfer to another school.

In a comprehensive school the influences interfering with a wise choice of curriculum may be reduced to a minimum. When an unwise choice has been made the pupil may be greatly aided in discovering a curriculum better adapted to his needs because he can see other work in the school, talk with school companions, and confer with teachers who are able to give him expert advice regarding such curriculums. When such a pupil has found a curriculum better adapted to his needs, he can be transferred to it without severance of school relationships and, what seems to him, the sacrifice of school loyalty.

Moreover, pupils in comprehensive schools have contacts valuable to them vocationally, since people in every vocation must be able to deal intelligently with those in other vocations, and employers and employees must be able to understand one another and recognize common interests. Similarly, teachers in comprehensive schools have a better opportunity to observe other curriculums and are thereby better able to advise pupils intelligently.

Summarizing under this head, the well-organized comprehensive school can make differentiated education of greater value than can the special-type school, because it aids in a wise choice of curriculum, assists in readjustments when such are desirable, and provides for wider contacts essential to true success in every vocation.

2. *For unification.*—When administered by a principal who himself recognizes the social value of all types of secondary education and inspires a broad spirit of democracy among teachers and pupils, the comprehensive high school is a better instrument for unification. Through friendships formed with pupils pursuing other curriculums and having vocational and educational goals widely different from their own, the pupils realize that the interests which they hold in common with others are, after all, far more important than the differences that would tend to make them antagonistic to others. Through school assemblies and organizations they acquire common ideas. Through group activities they secure training in cooperation. Through loyalty to a school which includes many groups they are

prepared for loyalty to State and Nation. In short, the comprehensive school is the prototype of a democracy in which various groups must have a degree of self-consciousness as groups and yet be federated into a larger whole through the recognition of common interests and ideals. Life in such a school is a natural and valuable preparation for life in a democracy.

3. *For objectives other than vocation.*—A comprehensive high school can provide much more effectively for health education, education for the worthy use of leisure, and home-making education than a number of smaller special-type schools can.

The most effective health education requires adequate equipment and instructors competent to diagnose health needs and direct health activities. Expenses and difficulties of duplication of such facilities in every smaller special-type school are almost prohibitive. Preparation for the worthy use of leisure is best achieved when there is a wide variety of activities from which pupils may select, such as arts and crafts clubs, literary and debating societies, and musical organizations. All of these require for their success enthusiastic leadership such as can best be secured from a large faculty. Girls in all curriculums should have the advantages of work in household arts under efficient directors and with adequate equipment. Such conditions are most readily provided in the comprehensive school where there is a strong department of household arts.

With the establishment of a special-type high school it frequently happens that various important phases of education are neglected or minimized in the other schools of that system.

4. *For accessibility.*—In cities large enough to require more than one high school it is desirable to have each school so located as to serve a particular section of the city, thereby reducing the expense and loss of time involved in travel on the part of pupils. The proximity of the school to the homes results also in greater interest in education on the part of pupils and parents, and consequently increases the drawing and holding power of the school.

5. *Adaptation to local needs.*—In recommending the comprehensive high school as the standard secondary school the commission recognizes that in large cities where two or more high schools are needed it is not always possible to provide every curriculum in each high school, such a practice being precluded by the fact that certain curriculums would thereby enroll in the several schools too few pupils to permit economical organization and administration. In such cases a few curriculums may well appear in selected comprehensive schools or even in a single school only, while other curriculums appear in every school.

The commission also recognizes the impracticability of offering every curriculum in every small rural high school. In such cases it is desirable that a curriculum for which the number of pupils does not warrant such duplication should be offered in selected schools, and that pupils needing that curriculum should go to those schools. This plan is substantially the same as that recommended for the large city.

6. *Effective organization of curriculums in comprehensive high schools.*—Finally, the commission recognizes that in the past relatively ineffective instruction has been afforded in some comprehensive schools. This has been due in part to the fact that everywhere vocational education has been passing and is still passing through a period of experimentation. The commission believes, however, that the most serious defect in vocational education in the comprehensive high school has been due to a lack of proper organization and administration. Effective vocational education can not be secured when administered like so many accidental groupings of subjects. To remedy this situation the commission recommends that each curriculum, or group of closely related curriculums, in the large comprehensive high school be placed under the supervision of a director whose task it shall be to organize that curriculum and maintain its efficiency. The curriculum directors must work under the general direction of the principal, who must be the coordinator of all the activities of the school. Especially is it necessary that each director shall be selected with the same care that would be exercised in choosing the principal of a special-type school enrolling as many pupils as are enrolled in the curriculum or curriculums under his direction. In medium-sized high schools unable to employ directors for the various curriculums, the teachers should be organized into committees to consider the problems of the various curriculums, all working under the direction of the principal.

Unless the various curriculums are effectively organized and administered, and unless the democratic spirit pervades the school, the comprehensive high school is in danger of failure; with these factors present, it has every promise of success.

XVII. RECOGNITION OF THE OBJECTIVES IN ORGANIZING THE SCHOOL.

The objectives must determine the organization, or else the organization will determine the objectives. If the only basis upon which a high school is organized is that of the subjects of study, each department being devoted to some particular subject, there will result an over-valuation of the importance of subjects as such, and the tendency will be for each teacher to regard his function as merely that of leading the pupils to master a particular subject, rather than that of using the subjects of study and the activities of the school as means for achieving the objectives of education. The departmental organization is desirable but needs to be supplemented. The two following methods are suggested:

(A) *The Principal's Council.*

The principal may select from his teachers a council, each member of which shall be charged with the responsibility of studying the activities of the school with reference to a specific objective. Plans for realizing these objectives should be discussed by the principal and the council. Without impairing in any way the ultimate responsibility of the principal, it will, as a rule, increase the efficiency of the school if the principal encourages initiative on the part of these council members and delegates to them such responsibilities as he finds they can discharge. The members of such a council and their duties are suggested as follows:

Health director.—This council member should seek to ascertain whether the health needs of the pupils are adequately met. For this purpose he should consider the ventilation and sanitation of the building, the provisions for lunch, the posture of pupils, the amount of home work required, the provisions for physical training, and the effects of athletics. He should find out whether the pupils are having excessive social activities outside of school, and devise means for gaining the cooperation of parents in the proper regulation of work and recreation. He may well see whether the teaching of biology is properly focused upon hygiene and sanitation.

Citizenship director.—The citizenship director should determine whether the pupils are developing initiative and the sense of personal responsibility. He should foster civic-mindedness through the school paper, debating society, and general school exercises, and give suggestions for directing the thinking of the pupils to significant problems of the day.

Curriculum directors.—As discussed in Section XVI of this report, for each important group of vocations for which the school offers a curriculum, or group of curriculums, there should be a director to study the needs of these vocations and find out the respects in which the graduates are succeeding or failing in meeting legitimate vocational demands. With the knowledge thus gained he should strive to improve the work offered by the school.

One of these curriculum directors should have charge of preparation for colleges and normal schools. He should obtain the records of graduates attending those schools and find out the strong and weak points in their preparation. He will advise with pupils intending to enter these institutions as to the work that they should take in the high school.

Director of vocational and educational guidance.—This member of the council should collect data regarding various vocational and educational opportunities and the qualifications needed. If the school is small, he may help individual pupils in acquiring an intelligent attitude toward the choice of a vocation or of a higher education; but if the school is large, he must train others who can know the pupils more intimately, to assist in this service, always holding himself ready to give advice.

Director of preparation for leisure.—This council member should, so far as possible, see that the pupils are developing interests that will assist them in later life to use their leisure wisely. He should consider especially the musical organizations, the school library, the art clubs and classes, and the various ways in which pupils are spending their leisure.

The large school may have need for additional directors to deal with other vital phases of education.

(B) *By Committees.*

The principal may appoint committees of teachers each of which would be charged with duties similar to those described. An advantage of the committee plan is that a larger number of teachers will be stimulated to acquire a broad educational point of view.

Theoretically, it is possible for the principal himself to supervise the teaching and direct all the activities of the school. Practically, however, the majority of administrators tend to become absorbed in a few aspects of education. In fact, intensive creative work along any one line on the part of the principal leads naturally to at least a temporary neglect of the other aspects of education. Consequently, either a principal's council or committees of teachers seem essential in order that none of the objectives may be neglected.

It is not intended that the council or the committees should in any way lessen the ultimate responsibility of the principal, but that by this means the cooperation of the entire teaching body may be secured and all the objectives held in view.

XVIII. SECONDARY EDUCATION ESSENTIAL FOR ALL YOUTH.

To the extent to which the objectives outlined herein are adopted as the controlling aims of education, to that extent will it be recognized that an extended education for every boy and girl is essential to the welfare, and even to the existence, of democratic society. The significance of these objectives is becoming more and more apparent under modern conditions in our democracy. These conditions grow out of increased knowledge of science with its rapidly extending applications to all the affairs of life, keener competition with its attendant dangers, closer contacts of peoples of varied racial and religious types, and greater assertiveness of all men and women in the control of their own destinies. These and many other tendencies increase the significance of health, worthy home-membership, vocation, citizenship, the worthy use of leisure, and ethical character.

Each of these objectives requires for its realization not only the training and habit formation that the child may secure, but also the intelligence and efficiency that can not be developed before adolescence. In fact, their realization calls for the full period allotted to both the junior and senior high schools.

Consequently, this commission holds that education should be so reorganized that every normal boy and girl will be encouraged to remain in school to the age of 18, on full time if possible, otherwise on part time.

XIX. PART-TIME SCHOOLING AS A COMPULSORY MINIMUM REQUIREMENT.

As stated in Section I of this report, only one American youth in about three reaches the first year of the four-year high school, and only one in about nine remains in school to the end of the high-school course. This condition is, in the last analysis, due principally to four causes: First, the limited range of instruction commonly offered by secondary schools; second, the failure on the part of the school adequately to demonstrate to young people and their parents the value of the education offered; third, the lure of employment, together with the desire for increased economic independence on the part of young persons; and fourth, economic pressure in the family, real or imagined.

The first of these causes is rapidly disappearing through the introduction of curriculums with rich vocational content. The second may be removed by subordinating deferred values and reorganizing instruction so as to make the values more evident to the learner, as discussed in Sections VIII and IX. The third may be diminished in its effect by greater virility in school work. Economic pressure will continue until social conditions can be materially improved.

In the meantime, a sound national policy dictates the urgent need for legislation whereby all young persons, whether employed or not, shall be required to attend school not less than eight hours in each week that schools are in session until they reach the age of 18.

Attendance for eight hours in each week will make possible important progress not only in vocational efficiency but also in the promotion of health, preparation for worthy home-membership, civic intelligence and efficiency, the better utilization of leisure, and ethical development. All these objectives are evidently as important for the young worker as for those who remain in full-time attendance at school.

The value of part-time instruction, if properly organized, is out of all proportion to the time involved, because it can utilize as a basis the new experiences of the young worker and his new social and civic contacts. Moreover, continued attendance at school will afford an intellectual stimulus too often lacking to these young persons under the modern subdivision of labor.

Consequently, this commission recommends the enactment of legislation whereby all young persons up to the age of 18, whether employed or not, shall be required to attend the secondary school not less than eight hours in each week that the schools are in session. In some States it may be held to be impracticable at the outset to require such part-time attendance beyond the age of 16 or 17, but the commission holds that the imperative needs of American democracy can not be met until the period is extended to 18.

To make this part-time schooling effective it will be necessary to adapt it specifically to the needs of the pupils concerned. Moreover, teachers must be trained for this new type of work. Without such provisions there is great danger of failure and a consequent reaction against this most valuable extension of secondary education.

In view of the importance of developing a sense of common interests and social solidarity on the part of the young worker and those of his fellows who are continuing in full-time attendance at school, it appears to this commission that this part-time education should be conducted in the comprehensive secondary school rather than in separate continuation schools, as is the custom in less democratic societies. By this plan the part-time students and the full-time students may share in the use of the assembly hall, gymnasium, and other equipment provided for all. This plan has the added advantage that the enrollment of all pupils may be continuous in the secondary school, thus furthering employment supervision on the one hand and making easier a return to full-time attendance whenever the lure of industry or the improvement of economic conditions in the family makes such a return inviting and feasible.

The part-time attendance for eight hours a week of all persons between 14 and 18 who are not now in school will require a large increase in the teaching force in secondary schools. No other single piece of educational legislation could, however, do more to raise the level of intelligence and efficiency and to insure the welfare of democracy.

XX. CONCLUSION.

In concluding this report on the cardinal principles of secondary education the commission would call attention to its 17 other reports in which the principles herein set forth are applied to the various aspects of secondary education. The reports now available are listed on the last page of this bulletin, and other are nearly ready for publication. One report will consider in detail the application of these principles to the organization and administration of secondary schools. Thirteen reports deal with the aims, methods, and content of the various subjects of study and curriculums in the light of these principles. Three others discuss vocational guidance, physical education, and the moral values that should be derived from secondary school organization and instruction.

It is becoming increasingly apparent that the problems of secondary education merit much more serious attention than they hav received heretofore. The study of the best methods for adapting secondary education to the needs of modern democratic life is but begun The physical, intellectual, emotional, and ethical characteristics o young people are still but vaguely comprehended. Such knowledge o social needs and educational theory and practice as is already available has been seriously studied by comparatively few administrator and teachers. Progress will depend very largely upon adequate professional training of teachers both before and after entering upon service. Plans must be adopted for pooling the results of successfu experimentation on the part of individual teachers. To make th reorganization effective, competent supervision and constructive leadership must be provided in the various fields of secondary education

It is the firm belief of this commission that secondary educatio in the United States must aim at nothing less than complete an worthy living for all youth, and that therefore the objectives described herein must find place in the education of every boy an girl.

Finally, in the process of translating into daily practice the cardinal principles herein set forth, the secondary school teachers of th United States must themselves strive to explore the inner meanin of the great democratic movement now struggling for supremac The doctrine that each individual has a right to the opportunity t develop the best that is in him is reinforced by the belief in the potential, and perchance unique, worth of the individual. The task o education, as of life, is therefore to call forth that potential worth.

While seeking to evoke the distinctive excellencies of individual and groups of individuals, the secondary school must be equall zealous to develop those common ideas, common ideals, and commo modes of thought, feeling, and action, whereby America, through rich, unified, common life, may render her truest service to a worl seeking for democracy among men and nations.

O

DEPARTMENT OF THE INTERIOR
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Mrs. Gladys G. Chaney.
Grace L. Davis.
Ethel Stith.
Mrs. Matilda D. Richards.
Lucy Schneider.

Division of School Directed Home Gardening:
J. H. Francis, Director.
Frederick A. Merrill, Regional Director.
Clarence M. Weed, Regional Director.
Cyril A. Stebbins, Regional Director.
John L. Randall, Regional Director.
Lester S. Ivins, Regional Director.
Ethel Gowans, Specialist in School and Home Gardening.
Yves L. Fontenot, Assistant Regional Director.
Frank M. Harper, Assistant Regional Director.
John W. Bridges, Assistant Regional Director.
Warren A. Roe, Assistant Regional Director.
Lewis McBrayne, Assistant Regional Director.
Roy B. Bowers, Assistant Regional Director.
Chauncey E. Cavett, Assistant Regional Director.

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[1] Special collaborator.

Division of School Directed Home Gardening—Continued.
Mrs. Mary K. Sherman, Assistant Regional Director.
Ralph P. Currier, Assistant Regional Director.
Ronald M. Chapman, Assistant Regional Director.
Everett F. Murphy, Assistant Regional Director.
Nathaniel M. Graham, Assistant Regional Director.
Samuel C. Wilson, Assistant Regional Director.
Ruth Fondersmith, Secretary and Office Manager.
Mrs. Josephine M. Leach.
Marguerite Bonneau.
Alta I. Donahue.
Edna M. Hickam.
Mrs. Ethel A. Muerman.
Mrs. Lottie Patton.
Mrs. Mary R. Hendley.
John L. Flatow.
Percival Webster.
Eugene Mavritte.

Americanization Division:
F. C. Butler, Chief.
Washington (D. C.) Office—
Joseph Mayper, Acting Chief.[1]
Matthew Kowalski.[1]
Florence Hogan.[1]
Margaret M. Long.[1]
Mrs. Angela M. Taylor.[1]
Nelson B. Ellis.[1]
New York City Office—
Frances A. Kellor, Special Adviser.[1]
Frances Rumsey.[1]
Edwin A. Rumball.[1]
Esther Berkowitz.[1]
Elfrida de Jaffa.[1]
Ralph F. Dunsters.[1]
Raymond Lanoto.[1]
Samuel M. Auerbach.[1]
Edmond McKenna.[1]
C. L. Edholm.[1]
Anne Rhodes.[1]
G. Manavian.[1]
Stefano Miele.[1]
Alfred Noyes.[1]
Angelo Patri.[1]
A. P. Savvidis.[1]
A. Yohannan.[1]

Division of Community Organization:
Edward J. Ward, Specialist in Community Organization.
Henry E. Jackson, Special Agent in Educational Community Organization.

School Board Service Station:
J. R. Hanna, Director.
Geo. E. Walk, Assistant Director.
Nellie Burnett.
Anna M. Morton.
Jessie D. Patton.
Bessie Peach.

Information Service:
W. Carson Ryan, jr., Specialist in Industrial Education and Vocational Guidance.

Alaska Division:
Washington (D. C.) Office—
William Hamilton, Alaskan Assistant.
David E. Thomas, Accountant.
Marie C. Kenealy.
Lillian M. Godfrey.

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[1] Special collaborator.

Alaska Division—Continued.
Seattle (Wash.) Office—
William T. Lopp, Superintendent of Education of Natives of Alaska.
Harry C. Sinclair, Supply Agent.
Chauncey C. Bestor, Special Disbursing Agent.
Julius C. Helwig.
James O. Williams.
Mrs. Ivy M. Knox.

Substation (Nashville, Tenn.):
Fletcher B. Dresslar, Special Agent in Charge.
Carter Alexander.
Charles E. Little.

Substation (Teachers' College, New York City):
George D. Strayer.[1]

Substation (University of Chicago, Chicago, Ill.):
Charles H. Judd.[1]

Substation (Stanford University, California):
Ellwood P. Cubberley.[1]

Special Collaborators in Field Service:

1. *Representatives of State Departments of Education:*
Spright Dowell, State Superintendent of Education, Montgomery, Ala.
Lester D. Henderson, Commissioner of Education, Juneau, Alaska.
James L. Bond, State Superintendent of Public Instruction, Little Rock, Ark.
Mrs. Mary C. C. Bradford, State Superintendent of Public Instruction, Denver, Colo.
Arthur R. Spaid, Commissioner of Education, Dover, Del.
Ethel E. Redfield, State Superintendent of Public Instruction, Boise, Idaho.
Fred Gladden, Clerk, State Board of Education, Indianapolis, Ind.
W. D. Ross, State Superintendent of Public Instruction, Topeka, Kans.
Leo M. Favrot, Assistant Rural School Supervisor, State Department of Education, Baton Rouge, La.
Augustus O. Thomas, State Superintendent of Public Instruction, Augusta, Me.
M. Bates Stephens, State Superintendent of Public Instruction, Baltimore, Md.
Payson Smith, Commissioner of Education, Boston, Mass.
Carl G. Schulz, State Superintendent of Education, St. Paul, Minn.
Uel W. Lampkin, State Superintendent of Public Instruction, Jefferson City, Mo.
May Trumper, State Superintendent of Public Instruction, Helena, Mont.
W. H. Clemmons, State Superintendent of Public Instruction, Lincoln, Nebr.
John E. Bray, State Superintendent of Public Instruction, Carson City, Nev.
Ernest W. Butterfield, State Superintendent of Public Instruction, Concord, N. H.
Calvin N. Kendall, Commissioner of Education, Trenton, N. J.
Thomas E. Finegan, Deputy Commissioner of Education, Albany, N. Y.
W. H. Pittman, Chief Clerk, State Department of Public Instruction, Raleigh, N. C.
Neil C. Macdonald, State Superintendent of Public Instruction, Bismarck, N. Dak.
Francis B. Pearson, State Superintendent of Public Instruction, Columbus, Ohio.
Ewing N. Collette, State Department of Education, Oklahoma, Okla.
Julius A. Churchill, State Superintendent of Public Instruction, Salem, Oreg.
Charles Carroll, State Department of Public Instruction, Providence, R. I.
John E. Swearingen, State Superintendent of Public Instruction, Columbia, S. C.
Fred L. Shaw, State Superintendent of Public Instruction, Pierre, S. Dak.
Elvin J. Norton, Deputy State Superintendent of Public Instruction, Salt Lake City, Utah.
Bennett C. Douglass, State Department of Education, Montpelier, Vt.
William R. Smithey, Secretary, State Board of Education, Richmond, Va.
Mrs. Josephine C. Preston, State Superintendent of Public Instruction, Olympia, Wash.
M. P. Shawkey, State Superintendent of Free Schools, Charleston, W. Va.
T. B. McDonough, State Department of Education, Cheyenne, Wyo.

2. *Higher Education:*
Kendric C. Babcock, Dean, College of Liberal Arts, University of Illinois, Urbana, Ill.
George A. Bissell, Professor of Mechanical Engineering, Michigan Agricultural College, East Lansing, Mich.
Albert P. Brigham, Professor of Geology, Colgate University, Hamilton, N. Y.
Eugene C. Branson, University of North Carolina, Chapel Hill, N. C.
Edward F. Buchner, Professor of Education, Johns Hopkins University, Baltimore, Md.
Nathan P. Colwell, Secretary, American Medical Association, Chicago, Ill.
Edward C. Elliott, Chancellor, University of Montana, Helena, Mont.
A. Caswell Ellis, Professor of Education, University of Texas, Austin, Tex.

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[1] Special collaborator.

Special Collaborators in Field Service—Continued.

2. *Higher Education*—Continued.
   - Fred M. Fling, Professor of History, University of Nebraska, Lincoln, Nebr.
   - W. H. Heck, Professor of Education, University of Virginia, Charlottesville, Va.
   - Parke L. Kolbe, President, Municipal University, Akron, Ohio.
   - W. B. Mooney, Professor of School Administration, State Teachers' College, Greeley, Colo.
   - Charles Alphonso Smith, Head of Department of English, United States Naval Academy, Annapolis, Md.
   - William H. Smith, President, Mississippi Agricultural and Mechanical College, Agricultural College, Miss.
   - John A. Thackston, Professor of Education, University of Tennessee, Knoxville, Tenn.
   - Harlan Updegraff, Professor of School Administration, University of Pennsylvania, Philadelphia, Pa.
   - Alvin E. Wagner, Professor of Education, Ohio University, Athens, Ohio.
   - Henry G. Williams, Editor of Ohio Teacher, Columbus, Ohio.
   - A. Duncan Yocum, Professor of Education, University of Pennsylvania, Philadelphia, Pa.
3. *Rural Education:*
   - J. H. Ackerman, President, State Normal School, Monmouth, Oreg.
   - Herbert E. Austin, East Carolina Teachers' Training School, Greenville, N. C.
   - Naaman R. Baker, County Superintendent of Schools, Birmingham, Ala.
   - Ernest Burnham, State Normal School, Ypsilanti, Mich.
   - Mabel Carney, Professor of Rural Education, Teachers' College, Columbia University, New York, N. Y.
   - Thomas J. Coates, Principal, State Normal School, Richmond, Ky.
   - Benjamin M. Davis, Professor of Agricultural Education, Miami University, Oxford, Ohio.
   - Edward A. Freeman, Superintendent of Schools, Itasca District No. 1, Grand Rapids, Minn.
   - Lloyd L. Friend, Supervisor of High Schools, State Department of Free Schools, Charleston, W. Va.
   - L. J. Hanifan, Supervisor of Rural Education, Morgantown, W. Va.
   - Marie Turner Harvey, Kirksville, Mo.
   - I. W. Huntzberger, High School, Washington, D. C.
   - Henry Israel, Research Secretary, International Committee, Y. M. C. A., New York, N. Y.
   - Walter E. Larson, State Inspector of Rural Schools, State Department of Public Instruction, Madison, Wis.
   - George M. Lynch, Superintendent of Schools, Arcadia, Fla.
   - Charles G. Maphis, Professor of Secondary Education, University of Virginia, Charlottesville, Va.
   - Richard H. Powell, Principal, State Normal School, Valdosta, Ga.
   - C. G. Sargent, Colorado Agricultural College, Fort Collins, Colo.
   - Charles C. Schmidt, Professor of Education, University of North Dakota, University, N. Dak.
   - Joseph H. Shriber, Professor of Rural Education, State Teachers' College, Greeley, Colo.
   - Fred W. Smith, President, North Dakota School of Forestry, Bottineau, N. Dak.
   - Samuel L. Smith, State Board of Education, Nashville, Tenn.
   - Rufus W. Stimson, Agent, State Board of Education, Boston, Mass.
   - Burr W. Torreyson, Superintendent of Schools, Fort Smith, Ark.
   - N. W. Walker, Inspector of High Schools, University of North Carolina, Chapel Hill, N. C.
   - Earl S. Wooster, State Normal School, Ellensburg, Wash.
   - Charles C. Wright, Superintendent of Schools, Hunting Creek, N. C.
4. *Commercial Education:*
   - Carl L. Altmaier, Professor of Secretarial Studies, Drexel Institute, Philadelphia, Pa.
   - Clarence M. Finfrock, Western Reserve University, Cleveland, Ohio.
   - George M. Forbes, University of Rochester, Rochester, N. Y.
   - John T. Holdsworth, Pittsburgh, Pa.
   - Isaac Lippincott, Professor of Economics, Washington University, St. Louis, Mo.
   - Everett W. Lord, Dean, School of Business Administration, Boston University, Boston, Mass.
   - Samuel McClintock, La Salle Extension University, Chicago, Ill.
   - Frederick B. Robinson, College of the City of New York, New York, N. Y.
   - E. N. Weinbaum, Portland, Oreg.
5. *City School Systems:*
   - Thomas H. Briggs, Professor of Education, Teachers' College, Columbia University, New York, N. Y.
   - William H. Hand, Superintendent of Schools, Columbia, S. C.
   - Edwin M. Hopkins, University of Kansas, Lawrence, Kans.
   - James F. Hosic, Chicago Normal College, Chicago, Ill.
   - Clarence D. Kingsley, Agent, State Board of Education, Boston, Mass.
   - Eugene M. Phillips, High School Inspector, State Department of Public Instruction, St. Paul, Minn.
   - John H. Phillips, Superintendent of Schools, Birmingham, Ala.
   - Fred N. Scott, Professor of Rhetoric, University of Michigan, Ann Arbor, Mich.

Special Collaborators in Field Service—Continued.

5. *City School System*—Continued.
   James W. Searson, State Agricultural College, Manhattan, Kans.
   F. E. Spaulding, Superintendent of Schools, Cleveland, Ohio.
   Ambrose L. Suhrie, Principal, Normal Training School, Cleveland, Ohio.
6. *Home Education:*
   Mrs. H. T. Birney, National Congress of Mothers, Washington, D. C.
   Richard Burton, Professor of English, University of Minnesota, Minneapolis, Minn.
   William Lyon Phelps, Professor of English, Yale University, New Haven, Conn.
   Charles Forster Smith, Professor of Greek and Classical Philology, University of Wisconsin, Madison, Wis.
7. *Kindergarten Education:*
   Mrs. Grace Davis, Redlands, Cal.
   Lucy Wheelock, Kindergarten Training School, Boston, Mass.
8. *Health Education:*
   R. W. Corwin, Pueblo, Colo.
   Frank A. Manny, Research Department, William Filene's Sons Co., Boston, Mass.
   Helen Parkhurst, New York, N. Y.
   Thomas S. Settle, Field Secretary, Playground and Recreation Association, New York, N. Y.
   Thomas D. Wood, Professor of Physical Education, Columbia University, New York, N. Y.
9. *School Directed Home Gardening:*
   Guyon J. Carter, Superintendent of Schools, Avoca, N. Y.
   O. D. Center, Director of Extension, State Agricultural College, Corvallis, Oreg.
   John H. Claypool, State Normal School, California, Pa.
   Otis M. Eastman, Board of Education, Cleveland, Ohio.
   C. Lee Gowan, Principal, Dekalb County Vocational School, Stone Mountain, Ga.
   M. De Turk High, Central State Normal School, Lock Haven, Pa.
   Dorris Hough, Baltimore, Md.
   Jean Jackson, Director, Garden Work, Appleton, Wis.
   Van Evrie Kilpatrick, Supervisor of School Gardens, New York, N. Y.
   Julius Kuhnert, Director, School-Home Gardens, Ithaca, N. Y.
   W. H. D. Meier, State Normal School, Framingham, Mass.
   Charles Michelson, Washington, D. C.
   Joshua H. Paul, Professor of Nature Study, University of Utah, Salt Lake City, Utah.
   Charles W. Pugsley, Director of Extension, University of Nebraska, Lincoln, Nebr.
   Fannie A. Stebbins, Director of School Gardens, Springfield, Mass.
   Myron J. Walter, Director, Department of School Gardens, Pittsburgh, Pa.
   George H. Whitcher, Deputy State Superintendent of Public Instruction, Concord, N. H.
10. *Americanization:*
   Frederic E. Farrington, Head Master, Chevy Chase School, Washington, D. C.
   Frank Leslie Hayford, Executive Secretary, Trustee of Massachusetts Training Schools, Boston, Mass.
   Harrison H. Wheaton, State Council of Defense, Hartford, Conn.
11. *Special Committee on Geography Teaching:*
   Cyrus C. Adams, Geographer, New York, N. Y.
   Richard E. Dodge, Washington, Conn.
   R. H. Whitbeck, Professor of Geography, University of Wisconsin, Madison, Wis.
12. *Special Committee on Mathematics Teaching:*
   David E. Smith, Professor of Mathematics, Columbia University, New York, N. Y.
   William F. Osgood, Professor of Mathematics, Harvard University, Cambridge, Mass.
   Jacob W. A. Young, Professor of Mathematics, University of Chicago, Chicago, Ill.
13. *International Relations:*
   Mrs. Fannie Fern Andrews, Secretary, American School Peace League, Boston, Mass.
14. *Negro Education:*
   S. G. Atkins, Principal, Slater Industrial and State Normal School, Winston-Salem, N. C.
   N. C. Newbold, Agent for Rural Colored Schools, State Department of Education, Raleigh, N. C.
15. *Illiteracy:*
   Mrs. Cora Wilson Stewart, President, Kentucky Illiteracy Commission, Frankfort, Ky.
16. *Moral Instruction:*
   Milton Fairchild, National Institution for Moral Instruction, Washington, D. C.

II.—DEPARTMENT OF STATE: EDUCATIONAL ACTIVITIES.

(1) School of Consular Instruction, Washington, D. C.
(2) Student Interpreters' Schools: (*a*) Constantinople, Turkey; (*b*) Tokyo, Japan; (*c*) Peking, China.

III.—Department of War: Military Educational Activities.

1. Military Academy, West Point, N. Y.
2. The Army War College, Washington, D. C.
3. The Army Service Schools, Fort Leavenworth, Kans. (This group of schools is not functioning at this post at present.)
4. The Army Medical School, Washington, D. C.
5. Medical Officers' Training Camps: (*a*) Camp Greenleaf, Fort Oglethorpe, Ga. (training of men for base hospitals and lines of communication); (*b*) Fort Riley, Kans. (training of regimental units).
6. Division of Physical Reconstruction: Educational Staff. The Surgeon General of the Army has designated the following general military hospitals for the work of physical reconstruction of disabled soldiers:[1]

(1) Walter Reed General Hospital, Washington, D. C.; (2) General Hospital No. 2, Fort McHenry, Md.; (3) General Hospital No. 3, Colonia, N. J.; (4) General Hospital No. 6, Fort McPherson, Ga.; (5) General Hospital No. 7, Roland Park, Baltimore, Md. (for the blind); (6) General Hospital No. 8, Otisville, N. Y.; (7) General Hospital No. 4, Fort Porter, N. Y.; (8) General Hospital No. 9, Lakewood, N. J.; (9) General Hospital No. 11, Cape May, N. J.; (10) General Hospital No. 16, New Haven, Conn.; (11) General Hospital No. 17, Markleton, Pa.; (12) Letterman General Hospital, San Francisco, Cal.; (13) United States Army Hospital, Fort Des Moines, Iowa; (14) Plattsburg Barracks Hospital, Plattsburg Barracks, N. Y.; (15) General Hospital, Fort Bayard, N. Mex.

7. Engineer Training Schools:[2] Camp Shelby, Miss.; Camp Greene, N. C.; Fort Leavenworth, Kans.; Camp Fremont, Cal.; Fort Benjamin Harrison, Ind.; Camp Humphreys, Va.; Camp Forrest, Ga.; Camp Leach (American University), D. C.
8. The Coast Artillery School, Fort Monroe, Va.
9. The School of Fire for Field Artillery, Fort Sill, Okla.

10. ORDNANCE SCHOOLS.[3]

(*a*) Ordnance maintenance and repair schools, Raritan Arsenal, Metuchen, N. J. (for the purpose of training both ordnance officers and enlisted men to become officers); (*b*) Ordnance welding school, Peoria, Ill. (for training enlisted men in oxy-acetylene welding); (*c*) Railway artillery school, Aberdeen Proving Ground, Aberdeen, Md. (for training both officers and enlisted men); (*d*) Instrument repair school, Frankford Arsenal, Pa. (for training both officers and enlisted men); (*e*) Ordnance gun reclining school, Watervliet Arsenal, Watervliet, N. Y. (for training of machinists and mechanics in gun reiclning for duty in base repair shops overseas); (*f*) Ordnance engineering school, Aberdeen Proving Ground, Aberdeen, Md. (for training both officers and enlisted men to become officers); (*g*) Ordnance supply school, Camp Hancock, Ga. (for training of advance enlisted men); (*h*) Ordnance concentration camp, Camp Hancock, Ga.

The Ordnance Bureau, through its Community Organization Branch, Industrial Service Section (Production Division), F. C. Butler in charge, is establishing elementary schools on its reservations, where the local authorities are not able to take care of the school population on their own reservations.

Jacksonville (near Nashville), Tenn., Charles E. Dryden, Superintendent of Schools, P. O. Box 612.
Hercules Powder Co., Nitro (near Charleston), W. Va., Hugh S. Mead, Superintendent of Schools.
Muscle Shoals, Ala., R. F. Myers, Superintendent of Schools.
Bethlehem Loading Co., Mays Landing, N. J., Stanley S. Kilkenney, Superintendent of Schools.
Atlas Powder Co., Perryville, Md., Agnes B. Morrison, supervising principal.
Penniman, Va., Karl L. Kregloe, Superintendent of Schools, P. O. Box 94.
Seven Pines (near Richmond), Va., Floyd B. Mann, Superintendent of Schools.
Atlantic Loading Co., Amatol, N. J., Elsa Jones, acting principal of schools.

11. AVIATION SCHOOLS (DIVISION OF MILITARY AERONAUTICS).

Primary Training.

(*a*) *Ground Schools:* Princeton University, Princeton, N. J.; University of Texas, Austin, Tex.; Cornell University, Ithaca, N. Y.; University of California, Berkeley, Cal.; University of Illinois, Urbana, Ill.; Camp Dick (intermediate gunnery).

(*b*) *Flying Schools:* Scott Field, Belleville, Ill.; Chanute Field, Rantoul, Ill.; Barron Field, Everman, Tex.; Carruthers Field, Benbrook, Tex.; Kelly Field (2 units), San Antonio, Tex.; Rich Field, Waco, Tex.; Eberts Field, Lonoke, Ark.; Taylor Field, Montgomery, Ala.; March Field, Riverside, Cal.; Mather Field, Sacramento, Cal.; Payne Field, West Point, Miss.; Love Field, Dallas, Tex.; Souther Field, Americus, Ga.; Park Field, Millington, Tenn.

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[1] "The reconstruction work in the hospitals will emphasize technical training in all lines capable of adaptation to the physical limitations of disabled men and in which employment will act as a therapeutic agent."—*Carry On.* Vol. 1, Sept., 1918, p. 30.

[2] See also Officers' Training Schools.

[3] The training of ordnance supply personnel is also carried on through the medium of 36 Ordnance Field Depots in this country, where a system of rotation of personnel has been devised where both the commissioned and enlisted personnel of these field depots receive a complete general training in ordnance supply work. The ordnance supply personnel required for this country and for duty overseas is furnished through this medium.

Advanced Training.

(*a*) *Bombing:* Gerstner Field (elementary), Lake Charles, La.; Ellington Field (advanced), Houston, Tex.

(*b*) *Observation:* Call Field (elementary), Wichita Falls, Tex.; Post Field (advanced), Fort Sill, Okla.; Langley Field (advanced), Hampton, Va.

(*c*) *Pursuit:* Wilbur Wright Field (Armorer's school, gunnery course—elementary), Fairfield, Ohio; Rockwell Field (advanced), San Diego, Cal.; Carlstrom Field (advanced), Arcadia, Fla.

(*d*) *Gunnery:* San Leon Field, Houston, Tex.; Taliaferro Field, Hicks, Tex.; Selfridge Field, Mount Clemens, Mich.; Rockwell Field, San Diego, Cal.; Dow Field, Arcadia, Fla.

Auxiliary Schools.

Armorer's School: Wilbur-Wright Field, Fairfield, Ohio.

School for Radio Mechanics: Carnegie Institute of Technology, Pittsburgh, Pa.

School for Radio Operators: Penn Field, Austin, Tex.

School for Radio Officers: Columbia University, New York, N. Y.

Photographic Schools: Langley Field, Hampton, Va.; U. S. School of Aerial Photography, Rochester, N. Y.; Cornell University, Ithaca, N. Y.

Preliminary Photographic School: Madison Barracks, Sacket Harbor, N. Y.

Instructors' Schools: Brooks Field, San Antonio, Tex.

Mechanics' Training Schools: Air Service Training School, Kelly Field, San Antonio, Tex.; Air Service Mechanics' Training School, Overland Building, St. Paul, Minn.

Firing Centers.

Commanding Officer: Attention Radio Officer, Headquarters, Military Aeronautics, Camp Jackson, S. C.

Air Service Radio Officer, through C. O. Field Artillery Brigade Firing Center, Camp Doniphan, Fort Sill, Okla.; Camp McClellan, Anniston, Ala.; Camp Knox, West Point, Ky.

Balloon Schools.

Army Balloon School, Fort Omaha, Nebr.; Army Balloon School, Lee Hall, Va.; Army Balloon School Arcadia, Cal.; Camp John Wise, San Antonio, Tex.; Balloon Detachment, Fort Monroe, Va.; Balloon Detachment, Fort Sill, Okla.; Balloon Detachment, Langley Field, Va.; Balloon Detachment, Camp McClellan, Anniston, Ala.; Thirty-first Balloon Company, West Point, Ky.; Forty-first Balloon Company, Camp, Jackson, Columbia, S. C.

12. The Schools for Bakers and Cooks: Camp Beauregard, Alexandria, La.; Camp Bowie, Fort Worth, Tex.; Camp Cody, Deming, N. Mex.; Camp Custer, Battle Creek, Mich.; Camp Devens, Ayer, Mass.; Camp Dix, Wrightstown, N. J.; Camp Dodge, Des Moines, Iowa; Camp Fremont, Palo Alto, Cal.; Camp Funston, Fort Riley, Kans.; Camp Gordon, Chamblee, Ga.; Camp Grant, Rockford, Ill.; Camp Greene, Charlotte, S. C.; Camp Hancock, Augusta, Ga.; Camp Humphreys, Accotink, Va.; Camp Jackson, Columbia, S. C.; Camp Kearny, Linda Vista, Cal.; Camp Lee, Petersburg, Va.; Camp Lewis, American Lake, Wash.; Camp Logan, Houston, Tex.; Camp McArthur, Waco, Tex.; Camp McClellan, Anniston, Ala., Camp Meade, Admiral, Md.; Camp Merritt, Dumont, N. J.; Camp Pike, Little Rock, Ark.; Camp Sevier, Greenville, S. C.; Camp Shelby, Hattiesburg, Miss.; Camp Sheridan, Montgomery, Ala.; Camp Sherman, Chillicothe, Ohio; Camp Taylor, Louisville, Ky.; Camp Travis, San Antonio, Tex.; Camp Upton, Yaphank, L. I.; Camp Wadsworth, Spartansburg, S. C.; Camp Wheeler, Macon, Ga.; Fort McKinley, P. I.; Fort Riley, Kans.; Fort Sam Houston, Tex.; Fort Shafter, Hawaii; Kelly Field, San Antonio, Tex.; Presidio, San Francisco, Cal.

13. Chemical War Service School, Camp Humphreys, Va.

14. Tank Corps School, Gettysburg, Pa.

15. Motor Transport School, Camp Joseph E. Johnston, Jacksonville, Fla.; Camp Meigs, Washington, D. C.; Camp Holabird, Baltimore, Md.; Camp Jesup, Atlanta, Ga.; Camp Normoyle, San Antonio, Tex.

16. Signal Corps.

17. Officers' Training Schools:

(1) Central Infantry Officers' Training Schools: Camp Lee, Va.; Camp Gordon, Ga.; Camp Pike, Ark., Camp Grant, Ill.; Camp McArthur, Tex.

(2) Central Field Artillery Officers' Training School: Camp Zachary Taylor, Ky.

(3) Central Engineer Officers' Training School: Camp Humphreys, Va.

(4) Signal Corps Officers' Training School: Camp Meade, Md.[1]

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[1] The personnel of this corps is drawn from the following schools: *School for radio electricians*—University of California; City College of New York; Indiana University; University of Nebraska; Dodge Institute Valparaiso. Ind.; Oregon Agricultural College; Purdue University, West Lafayette, Ind.; Texas Agricultural and Mechanical College; Tulane University, New Orleans, La.; University of Vermont; University of West Virginia; University of Wisconsin. *Telephone electricians*—University of Michigan; University of Minnesota; University of Utah. *School of military photography*—Columbia University, New York City. *School of meteorology*—Texas Agricultural and Mechanical College. *School of multiplex telegraphy*—City College of New York. *School for technical radio men*—Yale University, New Haven, Conn.

(5) Central Cavalry Officers' Training School: Camp Stanley, Tex.
(6) Central Machine Gun Officers' Training School: Camp Hancock, Ga.
(7) Coast Artillery Candidates' School: Fort Monroe, Va.
(8) Quartermaster Officers' Training Camp: Camp Joseph E. Johnston, Jacksonville, Fla.

17. UNITS OF THE STUDENTS' ARMY TRAINING CORPS.[1]

Section A.—Collegiate.[2]

Alabama.—Alabama Polytechnic Institute, Auburn; University of Alabama, University; Birmingham Southern College, Birmingham; Howard College, Birmingham; Spring Hill College, Spring Hill; State Normal School, Jacksonville; State Normal School, Troy; Talladega College (colored), Talladega.

Arizona.—University of Arizona, Tucson.

Arkansas.—Arkansas Baptist College (colored), Little Rock; Arkansas College, Batesville; Arkansas Cumberland College, Clarksville; University of Arkansas, Fayetteville; Henderson-Brown College, Arkadelphia; Hendrix College, Conway; Little Rock College, Little Rock; Ouachita College, Arkadelphia; Philander Smith College (colored), Little Rock; Second District Agricultural School, Russellville; State School of Agriculture, Jonesboro.

California.—University of California, Berkeley; College of Physicians and Surgeons, San Francisco; Leland Stanford University, Stanford University; Los Angeles State Normal, Los Angeles; Occidental College, Los Angeles; University of the Pacific, San Jose; Pomona College, Claremont; University of Redlands, Redlands; San Diego Junior College, San Diego; University of Santa Clara, Santa Clara; St. Ignatius University, San Francisco; St. Mary's College, Oakland; University of Southern California, Los Angeles; Throop College of Technology, Pasadena.

Colorado.—Colorado Agricultural College, Fort Collins; Colorado College, Colorado Springs; Colorado College of Dental Surgery, Denver; Colorado State Teachers' College, Greeley; University of Colorado, Boulder; University of Denver, Denver; State School of Mines, Golden.

Connecticut.—Connecticut Agricultural College, Storrs; Trinity College, Hartford; Wesleyan University, Middletown; Yale University, New Haven.

Delaware.—Delaware College, Newark.

District of Columbia.—Catholic University of America, Washington; Georgetown University, Washington; George Washington University, Washington; Howard University (colored), Washington.

Florida.—Florida University, Gainesville; John B. Stetson University, De Land; Southern College, Sutherland.

Georgia.—Atlanta Southern Dental College, Atlanta; Atlanta University (colored), Atlanta; Emory University, Atlanta; Georgia School of Technology, Atlanta; University of Georgia, Athens; Mercer University, Macon; Morehouse College (colored), Atlanta; North Georgia Agricultural College, Dahlonega; Oglethorpe University, Oglethorpe.

Hawaii.—Hawaii College, Honolulu.

Idaho.—Idaho University, Moscow.

Illinois.—Armour Institute of Technology, Chicago; Augustana College, Rock Island; Bradley Polytechnic Institute, Peoria; Carthage College, Carthage; Chicago College of Dental Surgery, Chicago; Chicago University, Chicago; Chicago Veterinary College, Chicago; Crane Junior College, Chicago; De Paul University, Chicago; Eureka College, Eureka; Greenville College, Greenville; Hahneman Medical School, Chicago; Hedding College, Abingdon; Illinois College, Jacksonville; Illinois University, Urbana; Illinois Wesleyan University, Bloomington; James Milliken University, Decatur; Knox College, Galesburg; Lake Forrest College, Lake Forrest; Lewis Institute, Chicago; Lombard College, Galesburg; Loyola University, Chicago; McKendree College, Labanon; Monmouth College, Monmouth; Northwestern College, Naperville, Northwestern University, Evanston; St. Ignatius College, Chicago; St. Viator College, Bourbonnais; Shurtleff College, Upper Alton; Wheaton College, Wheaton; Y. M. C. A. College, Chicago.

Indiana.—Butler College, Indianapolis; Central State Normal College, Danville; De Pauw University, Greencastle; Franklin College, Franklin; Hanover College, Hanover; Huntington College, Huntington; Indiana Dental College, Indianapolis; Indiana State Normal School, Terre Haute; Indiana University, Bloomington; Indiana Veterinary College, Indianapolis; University of Notre Dame, Notre Dame; Oakland City College, Oakland City; Purdue University, West Lafayette; Rose Polytechnic Institute, Terre Haute; State Normal School, Muncie: Taylor University, Upland; Tri-State College, Angola; Valparaiso University, Valparaiso; Wabash College, Crawfordsville.

Iowa.—Buena Vista College, Storm Lake; Central College, Pella; Coe College, Cedar Rapids; Cornell College, Mount Vernon; Des Moines College, Des Moines; Drake University, Des Moines; Dubuque College, Dubuque; Dubuque College and Seminary, Dubuque; Ellsworth College, Iowa Falls; Grinnell College, Grinnell; Iowa State College of Agriculture and Mechanic Arts, Ames; Iowa State Teachers' College, Cedar Falls; University of Iowa, Iowa City; Iowa Wesleyan College, Mount Pleasant; Luther College, Decorah; Morningside College, Sioux City; Parsons College, Fairfield; Simpson College, Indianola, Upper Iowa University, Fayette.

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[1] The Student's Army Training Corps is administered by the Committee on Education and Special Training, of the War Department, Mills Building, Washington, D. C.

[2] Up to and including Oct. 14, 1918. In some case provisional and subject to change.

Kansas.—Baker University, Baldwin City; Bethany College, Lindsborg; Central College, McPherson; College of Emporia, Emporia; Cooper College, Sterling; Fairmont College, Wichita; Fort Hays Normal School, Hays City; Kansas State Agricultural College, Manhattan; Kansas State Normal, Emporia; University of Kansas, Lawrence; Kansas Wesleyan University, Salina; Midland College, Atchison; Ottawa University, Ottawa; St. Mary's College, St. Marys; Southwestern College, Winfield; State Manual Training Normal School, Pittsburg; Washburn College, Topeka.

Kentucky.—Berea College, Berea; Bethel College, Russellville; Center College, Danville; Eastern Kentucky State Normal School, Richmond; Georgetown College, Georgetown; University of Kentucky, Lexington; Kentucky Wesleyan College, Winchester; University of Louisville, Louisville; Ogden College, Bowling Green; Transylvania College, Lexington; Western Kentucky State Normal School, Bowling Green.

Louisiana.—Jefferson College, Convent; Louisiana College, Pineville; Louisiana Industrial Institute, Ruston; Louisiana State University, Baton Rouge; Loyola University, New Orleans; St. Charles College, Grand Coteau; Southwestern Louisiana Industrial Institute, Lafayette; Tulane University, New Orleans.

Maine.—Bates College, Lewiston; Bowdoin College, Brunswick; Colby College, Waterville; University of Maine, Orono.

Maryland.—Baltimore College of Dental Surgery, Baltimore; Johns Hopkins University, Baltimore; Maryland State College of Agriculture, College Park; University of Maryland, Baltimore; Mount St. Mary's College, Emmettsburg; St. John College, Annapolis; Washington College, Chestertown; Western Maryland College, Westminster.

Massachusetts.—Amherst College, Amherst; Assumption College, Worcester; Boston College, Chestnut Hill; Boston University, Boston; Clark College, Worcester; College of the Holy Cross, Worcester; Harvard University, Cambridge; International Y. M. C. A. College, Springfield; Lowell Textile School, Lowell; Massachusetts Agricultural College, Amherst; Massachusetts Institute of Technology, Cambridge; Northeastern College, Boston; Tufts College, Medford; Wentworth Institute, Boston; Williams College, Williamstown; Worcester Polytechnic Institute, Worcester.

Michigan.—Adrian College, Adrian; Albion College, Albion; Alma College, Alma; Central State Normal School, Mount Pleasant; Detroit College of Medicine and Surgery, Detroit; Detroit Junior College, Detroit; University of Detroit, Detroit; Grand Rapids Junior College, Grand Rapids; Hillsdale College, Hillsdale; Hope College, Holland; Kalamazoo College, Kalamazoo; Michigan Agricultural College, East Lansing; Michigan College of Mines, Houghton; Michigan State Normal College, Ypsilanti; University of Michigan, Ann Arbor; Northern State Normal School, Marquette; Olivet College, Olivet; St. Cyrillus Methodist Seminary, Orchard Lake; Western State Normal School, Kalamazoo.

Minnesota.—Carleton College, Northfield; College of St. Thomas, St. Paul; Gustavus Adolphus College, St. Peter; Hamline University, St. Paul; Macalester College, St. Paul; University of Minnesota, Minneapolis; St. Olaf College, Northfield.

Mississippi.—Meridian College, Meridian; Millsaps College, Jackson; Mississippi Agricultural and Mechanical College, Agricultural College; Mississippi College, Clinton; Mississippi Normal School, Hattiesburg; University of Mississippi, University.

Missouri.—Central College, Fayette; Culver-Stockton College, Canton; Drury College, Springfield; First District State Normal School, Kirksville; Kansas City Dental College, Kansas City; Kansas City Polytechnic, Kansas City; Missouri School of Mines, Rolla; University of Missouri, Columbia; Missouri Valley College, Marshall; Missouri Wesleyan College, Cameron; Park College, Parkville; St. Louis University, St. Louis; State Normal School, Cape Girardeau; State Normal School, Maryville; State Normal College, Springfield; State Normal School, Warrensburg; Tarkio College, Tarkio; Washington University, St. Louis; Western Dental College, Kansas City; Westminster College, Fulton; William Jewel College, Liberty.

Montana.—Montana College of A. and M., Bozeman; Montana State School of Mines, Butte; University of Montana, Missoula; Montana Wesleyan College, Helena; Mount St. Charles College, Helena.

Nebraska.—Bellevue College, Bellevue; Cotner University, Bethany; Creighton University, Omaha; Doane College, Crete; Hastings College, Hastings; Kearney State Normal, Kearney; Nebraska State Normal, Peru; University of Nebraska, Lincoln; Nebraska Wesleyan University, University Place; Wayne Normal School, Wayne; York College, York.

Nevada.—State University of Nevada, Reno.

New Hampshire.—Dartmouth College, Hanover; New Hampshire College of Agricultural and Mechanical, Durham.

New Jersey.—Princeton University, Princeton; Rutgers College, New Brunswick; Stevens Institute of Technology, Hoboken.

New Mexico.—New Mexico College of Agricultural and Mechanical, State College; New Mexico Military Institution, Roswell; University of New Mexico, Albuquerque.

New York.—Alfred University, Alfred; University of Buffalo, Buffalo; Canisius College, Buffalo; Clarkson College of Technology, Potsdam; Colgate University, Hamilton; College of Dental and Oral Surgery of New York, New York City; College of the City of New York, New York City; Columbia University, New York City; Cooper Union Day Technical School, New York City; Cornell University, Ithaca; Fordham University, New York City; Hamilton College, Clinton; Hobart College, Geneva; Manhattan College, New York City, New York College of Dentistry, New York City; New York Homeopathic Medical

College, New York City; New York State College for Teachers, Albany; New York University, New York City; Niagara University, Niagara; Polytechnic Institute of Brooklyn, Brooklyn; Pratt Institute, Brooklyn; Rensselaer Polytechnic Institute, Troy; University of Rochester, Rochester; St. Bonaventure College, St. Bonaventure; St. John's College, Brooklyn; St. Lawrence University, Canton; St. Stephens College, Annandale; Syracuse University, Syracuse; The Long Island College Hospital, Brooklyn; Union University, Schenectady.

North Carolina.—Atlantic Christian College, Wilson; Biddle University (colored), Charlotte; Catawba College, Newton; Davidson College, Davidson; Elon College, Elon; Lenoir College, Hickory; North Carolina State College of Agriculture and Engineering, West Raleigh; University of North Carolina, Chapel Hill; Shaw University (colored), Raleigh; Trinity College, Durham; Wake Forest College, Wake Forest.

North Dakota.—Fargo College, Fargo; Jamestown College, Jamestown; North Dakota Agricultural College, Agricultural College; University of North Dakota, Grand Forks.

Ohio.—Antioch College, Yellow Springs; Ashland College, Ashland; Baldwin-Wallace College, Berea; Capitol University, Columbus; Case School of Applied Science, Cleveland; University of Cincinnati, Cincinnati; Defiance College, Defiance; Denison University, Granville; Eclectic Medical College, Cincinnati; Findlay College, Findlay; Heidelberg University, Tiffin; Hiram College, Hiram; Kenyon College, Gambier; Marietta College, Marietta; Miami University, Oxford; Mount Union College, Alliance; Municipal University of Akron, Akron; Muskingum College, New Concord; Oberlin College, Oberlin; Ohio College of Dental Surgery, Cincinnati; Ohio Northern University, Ada; Ohio State University, Columbus; Ohio University, Athens; Ohio Wesleyan University, Delaware; Otterbein University, Westerville; St. Ignatius College, Cleveland; St. Mary's College, Dayton; St. Xavier College, Cincinnati; Toledo University, Toledo; Western Reserve University, Cleveland, Wilberforce University (colored), Wilberforce; Wittenberg College, Springfield; College of Wooster, Wooster.

Oklahoma.—Central State Normal School, Edmond; East Central Normal School, Ada; Henry Kendall College, Tulsa; North Eastern State Normal School, Tahlequah; Northwestern Normal School, Alva; Oklahoma A. and M. College, Stillwater; University of Oklahoma, Norman; Philips University, Enid; Southeastern State Normal School, Durant; Southwestern Normal School, Weatherford.

Oregon.—North Pacific College of Dentistry, Portland; Oregon Agricultural College, Corvallis; University of Oregon, Eugene; Reed College, Portland; Willamette University, Salem.

Pennsylvania.—Albright College, Myerstown; Allegheny College, Meadville; Carnegie Institute of Technology, Pittsburgh; Bucknell University, Lewisburg; Dickinson College, Carlisle; Drexel Institute, Philadelphia; Duquesne University of the Holy Ghost, Pittsburgh; Franklin and Marshall College, Lancaster; Geneva College, Beaver Falls; Godfrey State Normal School, Millersville; Grove City College, Grove City; Hahnemann Medical College, Philadelphia; Jefferson Medical College, Philadelphia; Lafayette College, Easton; Lebanon Valley College, Annville; Lehigh University, South Bethlehem; Lincoln University (colored), Chester; Mansfield State Normal, Mansfield; Moravian College, Bethlehem; Muhlenberg College, Allentown; Pennsylvania College, Gettysburg; Pennsylvania Military College, Chester; Pennsylvania State College, State College; University of Pennsylvania, Philadelphia; Philadelphia Textile School, Philadelphia; University of Pittsburg, Pittsburgh; St. Joseph's College, Philadelphia State Normal School, East Stroudsburg; State Normal School, Indiana; Susquehanna University, Selinsgrove; Swarthmore College, Swarthmore; Temple University, Philadelphia; Thiel College, Greenville; Ursinus College, Collegeville; Villanova College, Villanova; Washington and Jefferson College, Washington; Waynesburg College, Waynesburg; West Chester State Normal, West Chester; Westminster College, New Wilmington.

Porto Rico.—College of Agriculture and Mechanic Arts, Mayaguez; University of Porto Rico, San Juan.

Rhode Island.—Brown University, Providence; Rhode Island State College, Kingston.

South Carolina.—Clemson Agricultural College, Clemson; College of Charleston, Charleston; Erskine College, Greenville; Furman University, Greenville; Newberry College, Newberry; Presbyterian College of South Carolina, Clinton; South Carolina Medical College, Charleston; University of South Carolina, Columbia; The Citadel, the Military College of South Carolina, Charleston; Wofford College, Spartanburg.

South Dakota.—Dakota Wesleyan University, Mitchell; Huron College, Huron; South Dakota School of Mines, Rapid City; South Dakota State College of A. and M., Brookings; University of South Dakota, Vermilion; Yankton College, Yankton.

Tennessee.—Carson and Newman College, Jefferson City; University of Chattanooga, Chattanooga; Cumberland University, Lebanon; East Tennessee State Normal, Johnson City; Fisk University (colored), Nashville; George Peabody College for Teachers, Nashville; King College, Bristol; Knoxville College (colored), Knoxville; Lincoln Memorial College, Cumberland Gap; Maryville College, Maryville; Meharry Medical College (colored), Nashville; Middle Tennessee State Normal, Murfreesboro; Southwestern Presbyterian University, Clarksville; Tennessee Polytechnic Institute, Cookville; University of Tennessee, Knoxville; Tusculum College, Greenville; Union University, Jackson; University of the South, Sewanee; Vanderbilt University, Nashville; West Tennessee State Normal School, Memphis.

Texas.—Abilene Christian College, Abilene; A. and M. College of Texas, College Station; Alexander College, Jacksonville; Austin College, Sherman; Baylor University, Waco; Bishop College (colored), Marshall; Burleson College, Greenville; Decatur College, Decatur; East Texas State Normal School, Commerce; Howard Payne College, Brownwood; College of Marshall, Marshall; Meridian College, Meridian; North Texas State Normal College, Denton; The Rice Institute, Houston; Sam Houston State Normal Institute, Huntsville; Simmons College, Abilene; Southern Methodist University, Dallas; Southwest Texas Normal, San Marcos; Southwestern University, Georgetown; Texas Christian University, Fort Worth; Texas Military College, Terrell; University of Texas, Austin; Trinity University, Waxahachie; Wayland College, Plainview; Wesley College, Greenville; West Texas Military Academy, San Antonio; West Texas Normal, Canyon; Wiley University (colored), Marshall.

Utah.—Agricultural College of Utah, Logan; Brigham Young University, Provo; University of Utah, Salt Lake City.

Vermont.—Middlebury College, Middlebury; Norwich University, Northfield; University of Vermont and State Agricultural College, Burlington.

Virginia.—Eastern College, Manassas; Emory and Henry College, Emory; Hampden-Sidney College, Hampden-Sidney; Medical College of Virginia, Richmond; Randolph-Macon College, Ashland; Richmond College, Richmond; Roanoke College, Salem; University of Virginia, Charlottesville; Virginia A. and M. and Polytechnic Institute, Blacksburg; Virginia Christian College, Lynchburg; Virginia Military Institute, Lexington; Virginia Union University (colored), Richmond; Washington and Lee, Lexington, William and Mary College, Williamsburg.

Washington.—College of Puget Sound, Tacoma; Gonzaga University, Spokane; State College of Washington, Pullman; Washington State Normal College, Cheney; University of Washington, Seattle; Whitman College, Walla Walla.

West Virginia.—Bethany College, Bethany; Davis and Elkins College, Elkins; West Virginia Collegiate Institute (colored), Institute; West Virginia Wesleyan College, Buckhannon; University of West Virginia, Morgantown.

Wisconsin.—Beloit College, Beloit; Campion College, Prairie du Chien; Carroll College, Waukesha; La Crosse State Normal School, La Crosse; Lawrence College, Appleton; Marquette University, Milwaukee; Milton College, Milton; Milwaukee State Normal School, Milwaukee; Oshkosh State Normal School, Oshkosh; Racine College, Racine; Ripon College, Ripon; River Falls State Normal School, River Falls; School of Engineering, Milwaukee; State Normal School, Eau Claire; State Normal School, Platteville; State Normal School, Stevens Point; State Normal School, Superior; State Normal School, Whitewater; Stout Institute, Menominee; University of Wisconsin, Madison.

Wyoming.—University of Wyoming, Laramie.

Section B.—Vocational Training of Soldiers.

Alabama.—Alabama Polytechnic Institute, Auburn; University of Alabama, Tuscaloosa; Tuskegee Institute (colored), Tuskegee.

Arkansas.—University of Arkansas, Fayetteville; Branch Normal School (colored), Pine Bluff.

Arizona.—University of Arizona, Tucson.

California.—University of California, Berkeley; Los Angeles State Normal School, Los Angeles. Oakland Technical High School, Oakland; Polytechnical School of Engineering, Oakland.

Connecticut.—Yale University, New Haven.

Colorado.—Colorado College, Colorado Springs; Colorado State Agricultural College, Fort Collins; University of Colorado, Boulder.

Delaware.—Delaware College, Newark.

District of Columbia.—Bliss Electrical School, Washington; Howard University (colored), Washington.

Florida.—University of Florida, Gainesville.

Georgia.—Atlanta University, Atlanta; Georgia School of Technology, Atlanta; University of Georgia, Athens.

Idaho.—Idaho School of Technology, Pocatello; University of Idaho, Moscow.

Illinois.—Armour Institute of Technology, Chicago; Bradley Polytechnic Institute, Peoria; Chicago Board of Education (Armour), Chicago; Chicago Board of Education (Brennan), Chicago; Chicago Board of Education (Harrison), Chicago; Chicago Board of Education (Old S. Div. H. S.), Chicago; Chicago Board of Trade, Chicago; University of Chicago, Chicago; Lewis Institute, Chicago; Loyal Order of Moose, Mooseheart; Northwestern University, Evanston.

Indiana.—Indiana University, Bloomington; Indianapolis Chamber of Commerce, No. 1, Indianapolis; Indianapolis Chamber of Commerce, No. 2, Indianapolis; Indianapolis Chamber of Commerce, No. 3, Indianapolis; Indianapolis Chamber of Commerce, No. 4, Indianapolis; Interlaken School, Rolling Prairie; Purdue University, West Lafayette; Richmond Commercial Club, Richmond; Rose Polytechnic Institute, Terre Haute; Valparaiso University, Valparaiso; Warsaw Chamber of Commerce, Warsaw.

Iowa.—Iowa A. and M. College, Ames; University of Iowa, Iowa City.

Kansas.—Fort Hays Normal School, Hays City; Kansas State Agricultural College, Manhattan; University of Kansas, Lawrence; Western University (colored), Quindaro.

Kentucky.—University of Kentucky, Lexington.

Louisiana.—Louisiana University, Baton Rouge; Tulane University, New Orleans.

Maine.—University of Maine, Orono.

Maryland.—Maryland State Agricultural College, College Park.

Massachusetts.—Franklin Union, Boston; Newton School Board, Newton; Springfield Technical H. S., Springfield; Tufts College, Medford; Wentworth Institute, Boston.

Michigan.—Michigan School of Mines, Houghton; Michigan Agricultural College, East Lansing; University of Michigan, Ann Arbor.

Minnesota.—University of Minnesota (Agrl.), St. Paul; University of Minnesota, Minneapolis; William Hood Dunwoody Industrial Institute, Minneapolis.

Mississippi.—Mississippi A. and M. College, Starkville.

Missouri.—University of Missouri, Columbia; Rahe Auto School, Kansas City; St. Louis Board of Education, St. Louis; Sweeney Auto School, Kansas City; Washington University, St. Louis.

Montana.—University of Montana, Missoula.

Nebraska.—University of Nebraska, Lincoln.

Nevada.—University of Nevada, Reno.

New Hampshire.—Dartmouth College, Hanover; New Hampshire State College of A. and M., Durham.

New Mexico.—New Mexico A. and M. College, State College.

New York.—Clarkson College of Technology, Potsdam; Columbia University, New York; Cornell University, Ithaca; College of the City of New York, New York; New York State College for Teachers, Albany; New York University, New York; Oswego Normal School, Oswego; Rochester A. and M. Institute, Rochester; Saunders Trade School, Yonkers; Syracuse University, Syracuse; Troy Central High School, Troy.

North Carolina.—Negro A. and T. College, Greensboro.

North Dakota.—North Dakota Agricultural College, Fargo; North Dakota School of Mines, Grand Forks

Ohio.—Cincinnati Board of Education, Cincinnati; University of Cincinnati, Cincinnati; Combined Normal and Ind. (colored), Wilberforce; Municipal University of Akron, Akron; Ohio Mechanics Institute, Cincinnati; Ohio State University, Columbus; Toledo University, Toledo.

Oklahoma.—University of Oklahoma, Norman.

Oregon.—Benson Polytechnic Institute, Portland; Oregon State Agricultural College, Corvallis.

Pennsylvania.—Bowman Technical School, Lancaster; Carnegie Institute of Technology, Pittsburgh; Erie School Board, Erie; Lafayette College, Easton; Lehigh University, South Bethlehem; Pennsylvania State College, State College; University of Pittsburgh, Pittsburgh; Polish National Alliance College, Cambridge Springs.

South Carolina.—Clemson Agricultural College, Clemson; South Carolina State A. and M. College (colored), Orangeburg; University of South Carolina, Columbia.

South Dakota.—South Dakota State A. and M. College, Brookings; South Dakota School of Mines, Rapid City; University of South Dakota, Vermillion.

Tennessee.—University of Tennessee, Knoxville.

Texas.—Texas A. and M. College, College Station; University of Texas, Austin.

Utah.—Utah Agricultural College, Logan; University of Utah, Salt Lake City.

Vermont.—University of Vermont, Burlington.

Virginia.—Hampton Institute (colored), Hampton; Richmond City School Board, Richmond; University of Virginia, Charlottesville.

Washington.—Modern Auto School, Spokane; Washington State College, Pullman.

Wisconsin.—Beloit College, Beloit; University of Wisconsin, Madison.

West Virginia.—University of West Virginia, Morgantown.

Naval Sections.

Alabama.—University of Alabama, University; Alabama Polytechnic Institute, Auburn.

California.—University of California, Berkeley; Leland Stanford Junior University, Stanford University; University of Southern California, Los Angeles.

Colorado.—University of Colorado, Boulder; University of Denver, Denver.

Connecticut.—Yale University, New Haven.

District of Columbia.—Georgetown University, Washington; George Washington University, Washington.

Florida.—University of Florida, Gainesville.

Georgia.—Emory University, Atlanta; Georgia School of Technology, Atlanta; University of Georgia, Athens.

Illinois.—Armour Institute of Technology, Chicago; University of Chicago, Chicago; University of Illinois, Urbana; Northwestern University, Evanston.

Indiana.—Indiana State University, Bloomington; University of Notre Dame, Notre Dame; Purdue University, Lafayette.

Iowa.—Iowa State College of A. and M. Arts, Ames; University of Iowa, Iowa City.

Kansas.—University of Kansas, Lawrence.

Kentucky.—State University of Kentucky, Lexington.

Louisiana.—Louisiana State University, Baton Rouge; Tulane University, New Orleans.

Maine.—Bowdoin College, Brunswick; University of Maine, Orono.

Maryland.—Johns Hopkins University, Baltimore.

Massachusetts.—Amherst College, Amherst; Boston University, Boston; College of the Holy Cross, Worcester; Harvard University, Cambridge; Massachusetts Institute of Technology, Cambridge; Tufts College, Medford; Williams College, Williamstown; Worcester Polytechnic Institute, Worcester.

Michigan.—University of Detroit, Detroit; Michigan Agricultural College, East Lansing; University of Michigan, Ann Arbor.

Minnesota.—University of Minnesota, Minneapolis.

Mississippi.—Mississippi A. and M. College, Starkville.

Missouri.—University of Missouri, Columbia; St. Louis University, St. Louis; Washington University, St. Louis.

Nebraska.—University of Nebraska, Lincoln.

New Hampshire.—Dartmouth College, Hanover; New Hampshire College, Durham.

New Jersey.—Princeton University, Princeton; Stevens Institute of Technology, Hoboken.

New York.—University of Buffalo, Buffalo; Colgate University, Hamilton; College of the City of New York, New York City; Columbia University, New York; Cornell University, Ithaca; Fordham University, New York; New York University, New York; Pratt Institute, Brooklyn; Rensselaer Polytechnic Institute, Troy; Syracuse University, Syracuse; Webb's Academy, Fordham Heights, New York City.

North Carolina.—North Carolina State College of Agriculture and Engineering, West Raleigh; The University of North Carolina, Chapel Hill.

Ohio.—Case School of Applied Science, Cleveland; University of Cincinnati, Cincinnati; Ohio Northern University, Ada; Ohio University, Athens; Ohio State University, Columbus; Western Reserve University, Cleveland.

Oklahoma.—University of Oklahoma, Norman.

Oregon.—Oregon Agricultural College, Corvallis; University of Oregon, Eugene.

Pennsylvania.—Carnegie Institute of Technology, Pittsburgh; Lafayette College, Easton; Lehigh University, S. Bethlehem; Pennsylvania State College, State College; University of Pennsylvania, Philadelphia; University of Pittsburgh, Pittsburgh.

Rhode Island.—Brown University, Providence.

South Carolina.—Clemson College, Clemson.

Tennessee.—University of Tennessee, Knoxville.

Texas.—Baylor University, Waco; Texas A. and M. College, College Station; University of Texas, Austin.

Vermont.—University of Vermont, Burlington.

Virginia.—Virginia Polytechnic Institute, Blacksburg; University of Virginia, University.

West Virginia.—West Virginia University, Morgantown.

Washington.—Washington State College, Pullman; University of Washington, Seattle.

Wisconsin.—Marquette University, Milwaukee; University of Wisconsin, Madison.

Marine Sections.

Cornell University, Ithaca, N. Y.; Harvard College, Cambridge, Mass.; Georgia School of Technology, Atlanta, Ga.; University of Kansas, Lawrence, Kans.; Leland Stanford Junior University, Palo Alto, Cal.; University of Minnesota, Minneapolis, Minn.; University of North Carolina, Chapel Hill; University of Texas, Austin, Tex.; Virginia Military Institute, Lexington, Va.; University of Washington, Seattle, Wash.; University of Wisconsin, Madison, Wis.; Yale University, New Haven, Conn.

18. LIST OF MEDICAL SCHOOLS AUTHORIZED FOR STUDENT ARMY TRAINING CORPS UNITS, OCTOBER 15, 1918.

Alabama.—University of Alabama, School of Medicine, Mobile.

Arkansas.—University of Arkansas, Medical Department, Little Rock.

California.—University of Southern California, School of Medicine, Los Angeles; Leland Stanford Junior University, School of Medicine, San Francisco; University of California, Medical School, San Francisco.

Colorado.—University of Colorado, School of Medicine, Denver.

Connecticut.—Yale University, School of Medicine, New Haven.

District of Columbia.—Georgetown University, School of Medicine, Washington; George Washington University, Medical School, Washington; Howard University, School of Medicine, Washington.

Georgia.—Emory University, School of Medicine, Atlanta; University of Georgia, Medical Department, Augusta.

Illinois.—Hahnemann Medical College and Hospital, Chicago; Loyola University, School of Medicine, Chicago; Northwestern University, Medical School, Chicago; Rush Medical College, Chicago; University of Illinois, College of Medicine, Chicago.

Indiana.—Indiana University, School of Medicine, Indianapolis.

Iowa.—State University of Iowa, College of Medicine, Iowa City; State University of Iowa, College of Homoepathic Medicine, Iowa City.

Kansas.—University of Kansas, School of Medicine, Rosedale.

Kentucky.—University of Louisville, Medical Department, Louisville.

Louisiana.—Tulane University, School of Medicine, New Orleans.

Maine.—Bowdoin Medical School, Brunswick-Portland.

Maryland.—Johns Hopkins University, Medical Department, Baltimore; University of Maryland, School of Medicine, Baltimore.

Massachusetts.—Boston University, School of Medicine, Boston; Medical School of Harvard University, Boston; Tufts College, Medical School, Boston.

Michigan.—University of Michigan, Medical School, Ann Arbor; University of Michigan, Homeopathic Medical School, Ann Arbor; Detroit College of Medicine and Surgery, Detroit.

Minnesota.—University of Minnesota, Medical School, Minneapolis.

Mississippi.—University of Mississippi, School of Medicine, Oxford.

Missouri.—University of Missouri, School of Medicine, Columbia; St. Louis University, School of Medicine, St. Louis; Washington University, Medical School, St. Louis.

Nebraska.—Creighton Medical College, Omaha; University of Nebraska, College of Medicine, Omaha.

New Hampshire.—Dartmouth Medical School, Hanover.

New York.—Albany Medical College, Albany; University of Buffalo, Department of Medicine, Buffalo; Columbia University, College of Physicians and Surgeons, New York City; Cornell University, Medical College, New York City; Fordham University, School of Medicine, New York City; New York Homeopathic Medical College, New York City; University and Bellevue Hospital Medical College, New York City; Syracuse University, College of Medicine, Syracuse.

North Carolina.—University of North Carolina, School of Medicine, Chapel Hill; Wake Forest College, School of Medicine, Wake Forest.

North Dakota.—University of North Dakota, School of Medicine, Grand Forks.

Ohio.—University of Cincinnati, College of Medicine, Cincinnati; Western Reserve University, School of Medicine, Cleveland; Ohio State University, College of Medicine, Columbus; Ohio State University, College of Homeopathic Medicine, Columbus.

Oklahoma.—University of Oklahoma, School of Medicine, Norman-Oklahoma City.

Oregon.—University of Oregon, Medical School, Portland.

Pennsylvania.—Hahnemann Medical College and Hospital, Philadelphia; Jefferson Medical College of Philadelphia; Temple University, Department of Medicine, Philadelphia; University of Pennsylvania, School of Medicine, Philadelphia; University of Pittsburgh, School of Medicine, Pittsburgh.

South Carolina.—Medical College of the State of South Carolina, Charleston.

South Dakota.—University of South Dakota, College of Medicine, Vermilion.

Tennessee.—Meharry Medical College, Nashville; Vanderbilt University, Medical Department, Nashville.

Texas.—Baylor University, College of Medicine, Dallas; University of Texas, Department of Medicine, Galveston.

Utah.—University of Utah, School of Medicine, Salt Lake City.

Vermont.—University of Vermont, College of Medicine, Burlington.

Virginia.—Medical College of Virginia, Richmond; University of Virginia, Department of Medicine, Charlottesville.

West Virginia.—West Virginia University, School of Medicine, Morgantown.

Wisconsin.—University of Wisconsin, Medical School, Madison; Marquette University, School of Medicine, Milwaukee.

19. LIST OF DENTAL SCHOOLS AUTHORIZED FOR STUDENTS' ARMY TRAINING CORPS UNITS, OCTOBER 15, 1918.

California.—University of Southern California, College of Dentistry, Los Angeles (Dr. Lewis A. Ford, Dean); University of California, College of Dentistry, San Francisco (Dr. Guy S. Millberry, Dean); College of Physicians and Surgeons, School of Dentistry, San Francisco (Dr. C. C. Boxton, Dean).

Colorado.—Colorado College of Dental Surgery, Denver (Dr. H. A. Flynn, Dean).

District of Columbia.—Georgetown University, School of Dentistry, Washington (Dr. Shirley W. Bowles, Dean); George Washington University, School of Dentistry, Washington (Dr. Carl J. Mess, Dean); Howard University, School of Dentistry, Washington (Dr. E. A. Bullock, Dean).

Georgia.—Atlanta Southern Dental College, Atlanta (Dr. S. W. Foster, President).

Illinois.—Chicago College of Dental Surgery, Chicago (Dr. Truman W. Brophy, Dean); Northwestern University, Dental School, Chicago (Dr. Arthur D. Black, Dean); University of Illinois, School of Dentistry, Chicago (Dr. F. B. Moorehead, Dean).

Indiana.—Indiana Dental College, Indianapolis (Dr. D. A. House, Dean).

Iowa.—University of Iowa, College of Dentistry, Iowa City (Dr. F. T. Breene, Dean).

Kentucky.—University of Louisville, School of Dentistry, Louisville (Dr. H. B. Tileston, Dean).

Louisiana.—Tulane University, School of Dentistry, New Orleans (Dr. Wallace Wood, Dean); Loyola University, School of Dentistry, New Orleans (Dr. C. V. Vignes, Dean).

Maryland.—University of Maryland, School of Dentistry, Baltimore (Dr. T. O. Heatwole, Dean); Baltimore College of Dental Surgery, Baltimore (Dr. B. H. Smith, Dean).

Massachusetts.—Harvard Dental School, Boston (Dr. Eugene Smith, Dean); Tufts College, Dental School, Boston (Dr. William Rice, Dean).

Michigan.—University of Michigan, School of Dentistry, Ann Arbor (Dr. M. L. Ward, Dean).

Minnesota.—University of Minnesota, School of Dentistry, Minneapolis (Dr. Alfred Owre, Dean).

Missouri.—St. Louis University, School of Dentistry, St. Louis (Dr. J. P. Harper, Dean); Washington University, School of Dentistry, St. Louis (Dr. J. H. Kennerly, Dean); Kansas City Dental College, Kansas City (Dr. C. C. Allen, Dean); Western Dental College, Kansas City (Dr. R. J. Rinehart, Dean).

Nebraska.—University of Nebraska, School of Dentistry, Lincoln (Dr. W. C. Davis, Dean); Creighton University, School of Dentistry, Omaha (Dr. J. C. Hipple, Dean).

New York.—University of Buffalo, Dental Department, New York City (Dr. D. H. Squire, Dean); College of Dental and Oral Surgery, New York City (Dr. William Carr, Dean); New York College of Dentistry, New York City (Dr. A. R. Starr, Dean).

Ohio.—Ohio State University, College of Dentistry, Columbus (Dr. H. M. Seamans, Dean); Western Reserve University, Dental College, Cleveland (Dr. F. M. Casto, Dean); Ohio College of Dental Surgery, Cincinnati (Dr. H. T. Smith, Dean).

Oregon.—North Pacific College of Dentistry, Portland (Dr. H. C. Miller, Dean).

Pennsylvania.—University of Pennsylvania, School of Dentistry, Philadelphia (Dr. Charles R. Turner, Dean); Philadelphia Dental College, Philadelphia (Dr. I. N. Bromell, Dean); University of Pittsburgh, College of Dentistry, Pittsburgh (Dr. H. E. Friessell, Dean).

Tennessee.—Vanderbilt University, School of Dentistry, Nashville (Dr. H. W. Morgan, Dean); Meharry Dental College, Nashville (Dr. G. W. Hubbard, Dean).

Texas.—Baylor University, School of Dentistry, Dallas.

Virginia.—Medical College of Virginia, Dental Department, Richmond (Dr. J. A. C. Hoggan, Dean).

Wisconsin.—Marquette University, School of Dentistry, Milwaukee (Dr. Henry L. Banzhaf, Dean).

20. LIST OF VETERINARY SCHOOLS AUTHORIZED FOR STUDENTS' ARMY TRAINING CORPS UNITS, OCTOBER 15, 1918.

Alabama.—Alabama Polytechnic Institute, School of Veterinary, Auburn.

Colorado.—State Agricultural College, Veterinary School, Fort Collins.

Illinois.—Chicago Veterinary College, Chicago; McKillip Veterinary College, Chicago.

Indiana.—Indiana Veterinary College, Indianapolis.

Iowa.—Iowa State College of Agriculture, School of Veterinary, Ames.

Kansas.—Kansas State Agricultural College, School of Veterinary, Manhattan.

Michigan.—Michigan Agricultural College, School of Veterinary, East Lansing.

New York.—Cornell University, State Veterinary College, Ithaca; University of New York, State Veterinary College, New York City.

North Dakota.—North Dakota Agricultural College, School of Veterinary, Agricultural College.

Ohio.—Ohio State University, College of Veterinary, Columbus.

Pennsylvania.—University of Pennsylvania, School of Veterinary, Philadelphia.

Washington.—Washington State College, Veterinary Department, Pullman.

21. LIST OF PHARMACY SCHOOLS AUTHORIZED FOR STUDENTS' ARMY TRAINING CORPS UNITS, OCTOBER 15, 1918.

California.—University of Southern California, School of Pharmacy, Los Angeles.

Colorado.—University of Colorado, College of Pharmacy, Boulder.

Illinois.—University of Illinois, School of Pharmacy, Chicago.

Indiana.—Purdue University, College of Pharmacy, Lafayette.

Iowa.—University of Iowa, School of Pharmacy, Iowa City.

Kansas.—University of Kansas, School of Pharmacy, Lawrence.

Michigan.—University of Michigan, School of Pharmacy, Ann Arbor.

Minnesota.—University of Minnesota, School of Pharmacy, Minneapolis.

Montana.—University of Montana, School of Pharmacy, Missoula.

Nebraska.—University of Nebraska, School of Pharmacy, Lincoln.

New York.—Columbia University, School of Pharmacy, New York City; Fordham Univeristy, School of Pharmacy, New York City, N. Y.

North Carolina.—University of North Carolina, School of Pharmacy, Chapel Hill.

North Dakota.—North Dakota Agricultural College, School of Pharmacy, Fargo.

Ohio.—Ohio State University, School of Pharmacy, Columbus; Western Reserve University, School of Pharmacy, Cleveland.

Oregon.—Oregon Agricultural College, Department of Pharmacy, Corvallis.

Oklahoma.—University of Oklahoma, School of Pharmacy, Norman.

South Carolina.—South Carolina Medical College, School of Pharmacy, Charleston.

South Dakota.—South Dakota State College, Department of Pharmacy, Brookings.

Tennessee.—Vanderbilt University, School of Pharmacy, Nashville.

Virginia.—Medical College of Virginia, School of Pharmacy, Richmond.

Washington.—Washington State College, Pharmacy Department, Pullman; University of Washington, College of Pharmacy, Seattle.

Wisconsin.—University of Wisconsin, Course in Pharmacy, Madison.

21. Philippine Government. (See pp. 39, 64, 87, 137, 139, 340.

22. Porto Rico Government. (See pp. 39, 65, 129, 137, 141, 246.

IV.—Department of the Navy: Naval Educational Activities.

1. United States Naval Academy of the United States, Annapolis, Md.
2. Camp schools and other training activities.

FIRST NAVAL DISTRICT.

Portsmouth, N. H.

Navy Yard Camp (yard and district forces, general training).

Old Hospital.

Boston, Mass.

Receiving Ship (Commonwealth Pier): Commissary Schools; Sub. R. S. for Engineering Material; Steam Engine School (Wentworth Institute); Gas Engine School (Franklin Union).

Bumkin Island: Training Camp (general training and armed guard).

Deer Island: Disciplinary barracks. General training.

Massachusetts Institute of Technology: Aviation Ground School.

Harvard University: Officer-Material School; United States Naval Radio School.

Communication office: Communication Officers' School.

Hingham, Mass.

Training Camp: Hospital Corps School.

Quincy, Mass.

Fore River Shipbuilding Co.: Fuel Oil School.

Readville, Mass.

Blue Hill Observatory: Aerographers' School.

Wakefield, Mass.

U. S. Navy Rifle Range.

SECOND NAVAL DISTRICT.

Newport, R. I.

U. S. Naval Training Station: Yeoman's School; Firemen's School; Buglers' School; Musicians' School; Gunners' Mates' Class (P. O. School); Quartermasters' Class (P. O. School); Coxswains' Class (P. O. School); Radio Class (Signal School); Signal Class (Signal School); Reserve Radio School; Hospital Corps School; Commissary Schools (Bakers, Cooks, Commissary Stewards).

Cloyne School House: Officer-Material School, second district.

Torpedo Station: Seaman Gunners' School; Bluejacket Guard; Officers' Torpedo Training School Deep-Sea Diving School.

New London, Conn.

Submarine Base: Officers' Submarine School, Enlisted Men's Submarine School, Submarine Tender School; Gyro-compass School.

Naval District Base (District Base Force; Sub Chaser Force; Experimental Laboratory); Listeners' School; Diving School (Salvage); Radio-Telephone School.

THIRD NAVAL DISTRICT.

New York City, N. Y.

Columbia University (men are quartered on U. S. S. *Granite State*): U. S. Navy Gas Engine School (Aviation); U. S. Navy Gas Engine School (Sub Chaser).

128 East Fifty-ninth Street: Cooks' School.

Manhattan Bridge Plaza, Brooklyn (Sperry Gyroscope Co.): Gyro-compass School; Sperry Fire-Control School.

Pelham Bay Training Camp.

Officer-Material School.

Signal Officer School.

Officer-Material School, N. A. R. (Deck).

Officer-Material School, N. A. R. (Engineer).

Quartermaster School.

Radio School.

Winchmen's School (Cargo).

Winchmen's School (Kite Balloon).

Cooks' School.

Radio Direction-Finder School.

District Communication Office: Communication Officers' School.

Hoboken, N. J.

Stevens Institute of Technology: Officer-Material School, N. A. R. (Engineer).

Jersey City, N. J.

Davis-Bournonville Co.: Oxy-acetylene Welders' School. (N. B. This school is administered as part of 4th dist.)

Keyport, N. J.

Aeromarine Plane & Motor Co.: Carpenters' Mates School (Aviation).

Bensonhurst, L. I.

Section Base: Quartermasters' School (Signal); Radio School; Diving School.

Bay Shore, L. I.

U. S. Naval Air Station: Aviation Mechanics' School; Aviation Flight School.

Rockaway Beach, L. I.

U. S. Naval Air Station: Hydrogen Engineers' School.

Utica, N. Y.

Savage Arms Corporation: Lewis Machine Gun School.

FOURTH NAVAL DISTRICT.

Princeton, N. J.

Princeton University: Paymasters' School.

Philadelphia, Pa.

Navy Yard: Receiving Ship; Quartermasters' School (Aviation); Fuel-oil School.

U. S. Naval Home: Cooks' School; Navigation School.

Parkway Bldg., Broad & Cherry Streets: Radio School.

University of Pennsylvania: Officer-Material School, fourth district; Navigation School.

Cape May, N. J.

Naval Training Camp (Wissahickon Barracks): Coxswains' School; Gunners' Mates' School; Hospital Corps School; Quartermasters' School; Signal School; Yeoman's School.

Section Base: Quartermasters' School; Coxswains' School; Elementary Gas Engine School (M. B.); "Standard" Gas Engine School (M. B.); Gunners' Mates' School; Artificers' School; Seamen's School.

FIFTH NAVAL DISTRICT.

Annapolis, Md.

U. S. Naval Academy: Reserve Officers' School.

Washington, D. C.

Navy Yard: Optical Repair School, Seamen Gunners' School.

Division of Operations, Navy Department: Communication Officers' School.

Radio, Va.

United States Naval Radio Station: Radio School (High Power).

Norfolk, Va.

St. Helena: (Receiving Ship), Artificers' School.

Hotels and Bakeries: Cooks' Schools.

Hampton Roads, Va.

Naval Operating Base: Naval Training Station, Officer-Material School (Fifth District), Electrical School (General), Quartermasters' School (Aviation), Carpenters' Mates' School (Aviation), Coxswains' School, Quartermasters' School, Signal School, Musicians' School.

SIXTH NAVAL DISTRICT.

Charleston, S. C.

U. S. S. Hartford.

Navy Yard: Receiving Ship, Machinists' Mates' School, Coppersmiths' School, Motor Boat Operators' School, Enginemen's School.

Mount Pleasant, S. C.

Navy Rifle Range.

Radio School.

Hospital Corps School.

SEVENTH NAVAL DISTRICT.

Miami, Fla.

United States Naval Air Station: Aviation Photographers' School.

Key West, Fla.

Naval Training Camp.

EIGHTH NAVAL DISTRICT.

Pensacola, Fla.

Naval Air Station: Aviation Instrument Makers' School, Quartermasters' School (Aviation), Carpenters' Mates' School (Aviation), Photographers' School, Machinists' Mates' School (Aviation).

New Orleans, La.

Navy Yard Station: Preparatory Officer-Material School, Ensigns' School, Quartermasters' School (Signal), Armed Guards' School, Mine Unit, Gas Engine School.

West End Park, La.

Training Camp.

Guilford, Miss.

Training Camp.

NINTH, TENTH, AND ELEVENTH NAVAL DISTRICTS.

Great Lakes, Ill.

Naval Training Station: Officer-Material School, Ninth District, Musicians' School, Gunners' School, Armed Guards' School, Coxswains' School, Quartermasters' School, Yeomen's School, Signal School, Rifle Range, Machinists' Mates' School (Aviation), Radio School, Hospital Corps School, Cooks' and Bakers' School, Public Works Regiment, Firemen's School, Armorers' School (Aviation, enlisted men), Armorers' School (Aviation, student officers).

Minneapolis, Minn.

Dunwoody Naval Training Schools: Quartermasters' School (Aviation), Carpenters' Mates' School (Aviation), Cooks' School, Bakers' School, Radio School, Coppersmiths' School, Machinists' Mates' School, Ground School, Machinists' Mates' School.

University of Minnesota: Hospital Corps School.

Detroit, Mich.

Packard Motor Car Co.: Liberty Engine School, Draftsmen's School (Aviation).

Ford Plant for "Eagles": Naval Training Camp.

Cleveland, Ohio.

Assistant Supervisor, N. A. R.: Petty Officers' School.

Akron, Ohio.

Goodyear Tire & Rubber Co.: Kite Balloon School, Quartermasters' School (Aviation).

Buffalo, N. Y.

Curtis Aeroplane Motor Corporation: Carpenters' Mates' School (Aviation), Coppersmiths' School (Aviation), Blacksmiths' School (Aviation), Shipfitters' School (Aviation), Quartermasters' School (Aviation).

TWELFTH NAVAL DISTRICT.

San Francisco, Cal.

Navy Yard, Mare Island: Receiving Ship, Officer-Material School, Electrical School (G), Electrical School (R), Preparatory Radio School, Signal School, Petty Officers' School, Blacksmiths' School, Shipfitters' School, Carpenters' Mates' or Shipwrights' School, Painters' School, Molders' School, Pattern-makers' School, Fuel Oil School.

Naval Training Station (Goat Island): Radio School, Signal School, Yeomen's School, Machinists' Mates' School, Hospital Corps School, Cooks' School, Bakers' School, Gunners' Mates' School, Musicians' School, Reserve Officers' School, Coxswains' School, Commissary Stewards' School, Firemen's School, Quartermasters' School.

San Diego, Cal.

Naval Training Camp: Radio School.

Naval Air Station: Machinists' Mates' School (Aviation), Quartermasters' School (Aviation).

Section Base: Officer-Material School.

San Pedro, Cal.

Naval Training Camp: Officer-Material School, Armed Guards' School.

Submarine Base.

THIRTEENTH NAVAL DISTRICT.

Bremerton, Wash.

Navy Yard, Puget Sound: Receiving ship, Navigation School, Gas Engine School, Listeners' School, Coxswains' School, Armed Guards' School, Gunners' Mates' School, Quartermasters' School.

Seattle, Wash.

Naval Training Camp (University of Washington): Officer-Material School (Thirteenth District), Radio School, Preliminary War Deck School, Aviation Ground School, Armed Guard School.

Municipal Electric Light Co.: Firemen's School (Fuel Oil), Keyport, Wash.

Pacific Coast Torpedo Station: Torpedo Class.

3. United States Coast Guard: Coast Guard Academy, New London, Conn.[1]

In times of peace the Coast Guard operates under the Treasury Department. In times of war or when the President so directs it operates as a part of the Navy, subject to the orders of the Secretary of the Navy.

4. Naval Medical School, Washington, D. C.:

(*a*) Navy Nurse Corps.

(*b*) Naval Hospital Corps Schools: (a) Naval Training Station, Newport, R. I.; (b) Naval Training Station, Great Lakes, Ill.; (c) Naval Training Station, San Francisco, Cal.; (d) Naval Operating Base, Hampton Roads, Va. Subsidiary schools have been established in civilian communities since the war as follows: University of Minnesota, Medical and Dental Schools; Columbia University, New York, N. Y.; Philadelphia College of Pharmacy, Philadelphia, Pa.

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[1] By the act of Congress approved January 28, 1915, the Revenue-Cutter Service and the Life-Saving Service were combined into the Coast Guard, and the titles of the former services then became obsolete. All duties previously performed by the Revenue-Cutter Service and the Life-Saving Service are now performed by the Coast Guard. Former revenue cutters and former life-saving stations are now called Coast Guard cutters and Coast Guard stations, respectively. The officers and men of the two services were transferred to corresponding positions in the Coast Guard by the terms of the act.

V.—DEPARTMENT OF THE INTERIOR: EDUCATIONAL ACTIVITIES.

1. United States Bureau of Education: Personnel, pages 5-10; Alaskan schools, pages 35, 40, 43.

2. OFFICE OF INDIAN AFFAIRS: INDIAN SCHOOLS, B. S. GARBER, CHIEF O DIVISION.

Name of school.	P. O. address.	Superintendent.
ARIZONA.		
Camp Verde superintendency	Camp Verde	Dr. Joe J. Taylor.
Camp Verde (day)	do	
Clarksdale (day)	Clarksdale	
Colorado River superintendency (bdg.)	Parker	A. F. Duclos.
Fort Apache superintendency	White River	Chas. L. Davis.
Fort Apache (bdg.)	Ft. Apache	
Canon (day)	do	
Cibecue (day)	do	
Cibecue (day) (mission)	Cibecue	
East Fork (day)	do	
East Fork (day) (mission)	White River	
Fort Mojave (bdg.) (nonreservation)	Mohave City	Wm. E. Thackrey.
Havasupai (day)	Supai, via Gd. Canyon	C. H. Gensler.
Kaibab (day)	Moccasin	Dr. E. A. Farron.
Leupp superintendency	Leupp	Stephan Janus.
Leupp (bdg.)	do	
Tolchaco (mission)	Tolchaco	
Moqui superintendency	Keams Canon	Leo Crane.
Moqui (not in operation)		
Chimopovy (day)	Toreva	
Hotevilla-Bacabi	Oraibi	
Oraibi (day)	do	
Polacca (day)	Polacca	
Second Mesa (day)	Toreva	
Navajo superintendency	Ft. Defiance	Peter Paquette.
Navajo (bdg.)	Navajo	
Chin Lee (bdg.)	Chin Lee	
Tohatchi (bdg.)	Tohatchi, N. M	
Cornfields (day)	Cornfields	
Luki Chuki (day)	Via Ft Defiance	
Ganado (Presbyterian mission)	Ganado	
Rehoboth (Christian Reformed mission)	Gallup, N. M	
St. Michael's (Catholic)	St. Michaels	
Phoenix (nonreservation) (bdg.)	Phoenix	J. B. Brown.
Pima superintendency	Sacaton	W. F. Haygood.
Pima (bdg.)	do	
Blackwater (day)	Blackwater	
Casa Blanca (day)	Sacaton	
Chiu Chuischu (day)	do	
Cocklebur (day)	do	
Gila Bend (day)	do	
Gila Crossing (day)	Phoenix (16 mi. so.)	
Maricopa (day)	Phoenix (12 mi. so.)	
Quajote (day)		
Santan (day)	Sacaton	
St. Ann's (Guadalupe) (Catholic mission)		
St. John's (Catholic mission)	Phoenix (17 mi. so.)	
Rice Station (bdg.)	Rice	Dr. J. S. Perkins.
Salt River superintendency	Scottsdale	Byron A. Sharp.
Salt River (day)	do	
Lehi (day)	Mesa	
San Carlos superintendency	San Carlos	Jno. J. Terrell.
San Carlos (day)	do	
Bylas (day)	Geronimo	
Rice (Evangelical Lutheran mission)		
San Xavier superintendency	Tucson	Thos. F. McCormick.
San Xavier (day)		
Indian Oasis (day)	Indian Oasis	
Santa Rosa (day)		
Tucson (day)	Tucson	
Lourdes (Catholic mission)		
St. Anthony's (day) (Catholic mission)	Escuela	
San Miguel (Catholic) (day)		
San Solano (Catholic) (day)		
Tucson (Presbyterian mission)	Tucson	
Truxton Canon (bdg.)	Valentine	Chas. D. Wagner.
Western Navajo superintendency	Tuba City	Walter Runke.
Western Navajo (bdg.)	do	
Marsh Pass (bdg.)	Kayenta	
Moencopi (day)	Tuba City	

Name of school.	P. O. address.	Superintendent.
CALIFORNIA.		
Bishop superintendency	Bishop	Ray R. Parrett.
Bishop (day)	do	
Big Pine (day)	Big Pine	
Independence (day)	Independence	
Pine Creek (day)	Round Valley	
Campo (day)	Campo	Dr. Carl B. Boyd.
Fort Bidwell superintendency	Ft. Bidwell	Chas. T. Coggeshall.
Fort Yuma superintendency	Yuma	Loson L. Odle.
Fort Yuma (bdg.)	do	
Cocopah (day)	Somerton	
Yuma Valley (day)	Yuma	
Greenville (nonreservation) (bdg.)	Greenville	Edgar K. Miller.
Hoopa Valley (bdg.)	Hoopa	Jesse B. Mortsolf.
Malki superintendency	Banning	Jas. E. Jenkins.
St. Boniface (Catholic mission)		
Pala superintendency	Pala	Paul T. Hoffman.
Pala (day)	do	
Capitan Grande (day)	Lakeside	
La Jolla (day)	Valley Center	
Rincon (day)	do	
Round Valley superintendency	Covelo	Walter W. McConihe.
Round Valley (day)	do	
Potter Valley (day)		
Pinoliville (day)	Ukiah	
Upper Lake (day)	Upper Lake	
Yokaia	Ukiah	
Sherman Institute (nonreservation) (bdg.)	Riverside	F. M. Conser.
Soboba superintendency	San Jacinto	H. E. Wadsworth.
Mesa Grande (day)	Mesa Grande	
Volcan (day)	Santa Isabel	
Tule River superintendency	Porterville	Frank A. Virtue.
Tule River (day)	do	
Auberry (day)	Auberry	
Burrough (day)	Porterville	
COLORADO.		
Southern Ute superintendency	Ignacio	Ed. E. McKean.
Southern Ute (bdg.)	do	
Allen (day)	Bayfield	
Ute Mountain (day)	Towaoc	Axel Johnson.
IDAHO.		
Coeur d'Alene superintendency	Sorrento	M. D. Colgrove.
Kalispel (day)	Cusick, Wash	
De Smet (Catholic mission)	De Smet	
Kootenai (day)	Bonners Ferry	
Fort Hall superintendency	Fort Hall	H. H. Miller.
Fort Hall (bdg.)	do	
Skull Valley (day)	Iosepa	
Good Shepherd (Episcopal mission)		
Presbyterian mission		
Fort Lapwai superintendency	Lapwai	Dr. Jacob Breid.
Sanatorium and school	do	
St. Joseph's (mission school)	Slickpoo	
IOWA.		
Sac and Fox superintendency	Toledo	Dr. R. L. Russell.
Sanatorium and school	do	
Fox (day)	Tama	
Mesquakie (day)	do	
KANSAS.		
Haskell Inst. (nonreservation; bdg.)	Lawrence	Hervey B. Peairs.
Kickapoo (bdg.)	Horton	Leo S. Bonnin.
MICHIGAN.		
Mackinac superintendency	Baraga	Dr. R. S. Buckland.
Baraga (Holy Name) (Catholic mission)	do	
Harbor Springs (Holy Childhood) (Catholic mission)	Harbor Springs	
Mount Pleasant (nonreservation; bdg.)	Mount Pleasant	R. A. Cochran.
MINNESOTA.		
Cass Lake (bdg.)	Cass Lake	Chas. H. Allender.
Fond du Lac superintendency	Cloquet	Geo. W. Cross.
Fond du Lac (day)	do	
Normantown (day)	Sawyer	
Grand Portage (day)	Grand Portage	M. D. Archiquette.

Name of school.	P. O. address.	Superintendent.
MINNESOTA—continued.		
Leech Lake (bdg.)	Onigum	H. K. Meyer.
Nett Lake (day)	Nett Lake	Nick Conner.
Pipestone superintendency	Pipestone	Frank T. Mann.
Pipestone (nonreservation; bdg.)	do	
Red Lake superintendency	Red Lake	Walter F. Dickens.
Red Lake (bdg.)	do	
Cross Lake (bdg.)	Ponemah	
St. Mary's (Catholic mission)	Red Lake	
Vermilion Lake (bdg.)	Tower	Henry A. Edsall.
White Earth superintendency	White Earth	John H. Hinton.
White Earth (bdg.)	do	
Beaulieu (day)	do	
Elbow Lake (day)	do	
Pine Point (day)	Ponsford	
Round Lake (day)	White Earth	
Twin Lake (day)	do	
St. Benedict's (Catholic mission)	do	
MONTANA.		
Blackfeet superintendency	Browning	Harry C. Power.
Blackfeet (bdg.)	do	
Heart Butte (day)	do	
Old Agency or Badger Creek (day)	Family	
Holy Family (Catholic mission)	Browning	
Crow superintendency	Crow Agency	Calvin H. Asbury.
Crow (bdg.)	do	
Pryor Creek (bdg.)	Pryor	
Black Lodge (Am. Missionary Soc.)		
Lodge Grass (Baptist bdg.)	Lodgegrass	
Reno (Am. Missionary Soc.)	do	
St. Ann's (Catholic mission)	do	
St. Xavier (Catholic mission)	St. Xavier	
Wyola (Baptist)	Wyola	
Flathead superintendency	Dixon	Theodore Sharp.
St. Ignatius (Catholic mission)	St. Ignatius	
Fort Belknap superintendency	Harlem	Alfred H. Symons.
Fort Belknap (bdg.)	do	
Lodge Pole (day)	Lodge Pole	
St. Paul's (Catholic mission)	St. Paul's	
Fort Peck superintendency	Poplar	Eugene D. Mossman.
Fort Peck (bdg.)	do	
School No. 1	Culbertson	
School No. 2	Brockton	
School No. 3	Frazer	
Wolf Point (Presbyterian mission)	Wolf Point	
Tongue River superintendency	Lamedeer	J. A. Buntin.
Tongue River (bdg.)	do	
Lamedeer (day)	do	
Birney (day)	Birney	
St. Labre's (Catholic mission)	Ashland	
NEBRASKA.		
Genoa (nonreservation; bdg.)	Genoa	Sam B. Davis.
Santee superintendency.		
Santee Normal Training School (Cong.)	(Under Sisseton superintendency.)	
Winnebago superintendency	Winnebago	C. D. Munroe.
St. Augustine (Catholic mission)		
Winnebago Mission (bdg.)	Winnebago	
All Saints' Mission (day)	do	
NEVADA.		
Carson (nonreservation; bdg.)	Stewart	Jas. B. Royce.
Fallon superintendency	Fallon	Harry M. Carter.
Fallon (day)	do	
Lovelocks (day)	Lovelocks	
Fort McDermitt (day)	McDermitt	F. A. Swayne.
Moapa River (day)	Las Vegas	Dr. L. B. Sandall.
Nevada (bdg.)	Nixon	Jos. D. Oliver.
Walker River (day)	Schurz	Robt. E. Burris.
Western Shoshone superintendency.		
Schools Nos. 1 and 2 (day)	Owyhee	H. D. Lawshe.
NEW MEXICO.		
Albuquerque (nonreservation; bdg.)	Albuquerque	Reuben Parry.
Jicarilla (bdg.)	Dulce	C. E. Farris.
Mescalero (bdg.)	Mescalero	Wm. A. Light.
Pueblo Bonito superintendency	Crownpoint	Saml. F. Stacher.
Pueblo Bonito (bdg.)	do	
Pinedale (day)	do	

Name of school.	P. O. address.	Superintendent.
NEW MEXICO—continued.		
Pueblo superintendency (day).		
Albuquerque	Albuquerque	P. T. Lougergan.
Acomita (day)	Acomita	
Encinal (day)	Cubero	
Isleta (day)	Isleta	
Laguna (day)	Laguna	
McCarty's	Acomita	
Mesita (day)	Laguna	
Paguate (day)	do	
Paraje (day)	Casa Blanca	
San Felipe (day)	Algodones	
Seama (day)	Seama	
Bernalillo (Catholic mission) (day)	Bernalillo	
Santa Fe:		
Cochiti (day)	Pena Blanca	
Jemez (day)	Jemez	
Picuris (day)	Penasco	
San Ildefonso (day)	Buckman	
San Juan (day)	Chamita	
Santa Clara (day)	Espanola	
Santa Domingo (day)	Domingo	
Sia (day)	Sandoval	
Taos (day)	Taos	
St. Catherine's Mission (Catholic) (day)		
San Juan superintendency.		
San Juan (bdg.)	Shiprock	Evan W. Estep.
Toadlena (bdg.)	Crozier	
Santa Fe (nonreservation: bdg.)	Santa Fe	Jno. D. De Huff.
Zuni superintendency	Blackrock	Robt. J. Bauman.
Zuni (bdg.)	do	
Christian Reformed Mission	do	
Zuni (day)	do	
NORTH CAROLINA.		
Cherokee superintendency	Cherokee	Jas. E. Henderson.
Cherokee (bdg.)	do	
Big Cove (day)	Stonery	
Birdtown (day)	Cherokee	
Little Snowbird (day)	Andrews	
Snowbird Gap (day)	Robbinsville	
NORTH DAKOTA.		
Bismarck (nonreservation, bdg.)	Bismarck	R. I. Thompson.
Fort Berthold superintendency	Elbowoods	E. W. Jermark.
School No. 1 (day)	Armstrong	
School No. 2 (day)	Independence	
School No. 3 (day)	Shell Creek	
Fort Berthold (Catholic mission)	Elbowoods	
Congregational (Congregational mission)	do	
Fort Totten (bdg.)	Fort Totten	S. A. M. Young.
Standing Rock superintendency.		
Standing Rock (bdg.)	Fort Yates	Jas. B. Kitch.
Martin Kenel (bdg.)	do	
Bullhead (day)	Bullhead	
Cannon Ball (day)	Fort Rice	
Grand River (day)	Little Eagle, S. D	
Little Oak Creek (day)	do	
Porcupine (day)	Shields	
St. Elizabeth's (Episcopal mission)	Wakpala, S. D	
Standing Rock Mission	Agency	
Turtle Mountain superintendency	Belcourt	R. C. Craige.
Schools Nos. 1 to 4, inclusive (day)	do	
School No. 5 (day)	Dunseith	
Wahpeton (nonreservation, bdg.)	Wahpeton	P. Carter.
OKLAHOMA.		
Cantonment (bdg.)	Cantonment	R. E. L. Daniel.
Cheyenne and Arapaho superintendency.		
Cheyenne and Arapaho (bdg.)	Concho	W. W. Scott.
Chilocco (nonreservation, bdg.)	Chilocco	O. H. Lipps.
Kiowa superintendency	Anadarko	C. V. Stinchecum.
Anadarko (bdg.)	do	
Ft. Sill (bdg.)	Lawton	
Rainy Mountain (bdg.)	Gotebo	
Riverside (bdg.)	Anadarko	
Osage superintendency	Pawhuska	J. Geo. Wright.
Osage (bdg.)	do	
St. Louis's (Catholic mission)	do	
Otoe (bdg.)	Otoe	Geo. A. Hoyo.
Pawnee (bdg.)	Pawnee	Thos. Ferris.

Name of school.	P. O. address.	Superintendent.
OKLAHOMA—continued.		
Ponca (bdg.)	Whiteagle	Chas. E. Norton.
Red Moon (Seger Supt.) (day)	Hammon	
Seger (bdg.)	Colony	Jesse W. Smith.
Seneca superintendency	Wyandotte	Carl F. Mayer.
Seneca (bdg.)	do	
St. Mary's (Catholic mission)	Baxter Springs, Kans, R. F. D. No. 2.	
Shawnee superintendency	Shawnee	Ira C. Deaver.
Shawnee (bdg.)		
Sacred Heart (St. Benedict's) (Catholic mission)	Sacred Heart	
Sacred Heart (St. Mary's) (Catholic mission)	do	
Five Civilized Tribes.		
Cherokee Nation:		
Cherokee Orphan Training School (bdg.)	Park Hill	H. H. Ransom.
Creek Nation:		
Euchee (bdg.)	Sapulpa	C. L. Batson.
Eufaula (bdg.)	Eufaula	Mrs. G. C. Melton.
Nuyaka (bdg.)	Nuyaka	Jack Brown.
Chickasaw Nation:		
Collins (bldg. burned May 9, 1916; abolished Oct. 12, 1917.)		
El Meta Bond College (private)	Minco	
Choctaw Nation:		
Armstrong Male Academy (bdg.)	Academy	E. A. Porter.
Jones Male Academy (bdg.)	Hartshorne	H. P. Warren.
Tuskahoma Academy (bdg.)	Tuskahoma	Wm. D. Dilbeck.
Wheelock Academy (bdg.)	Millerton	M. R. Foreman.
Old Goodland (nondenominational)	Hugo	
St. Agnes Mission (Catholic)	Antlers	
Chickasaw and Choctaw Nation:		
Murray School of Agriculture (private)	Tishomingo (State School).	
Oklahoma Presbyterian College (mission)	Durant	
St. Agnes Academy (Catholic (mission)	Ardmore	
St. Elizabeth's (Catholic mission)	Purcell	
St. Joseph's (Catholic mission)	Chickasha	
Seminole Nation:		
Mekusukey (bdg.)	Seminole	E. Swengel.
OREGON.		
Klamath superintendency	Klamath Agency	J. M. Johnson.
Klamath (bdg.)	do	
Modoc Point (day)	do	
Schools Nos. 2 and 3 (day)	Beatty, via Agency	
Salem (nonreservation, bdg.)	Chemawa	Harwood Hall.
Umatilla superintendency	Pendleton	E. L. Swartzlander.
St. Andrew's (Kate Drexel) (Catholic mission)	Pendleton	
Warm Springs superintendency	Warm Springs	O. L. Babcock.
Warm Springs (bdg.)	do	
Simnasho (day)	Simnasho	
SOUTH DAKOTA.		
Cheyenne River superintendency	Cheyenne Agency	
Cheyenne River (bdg.)		J. H. McGregor.
Crow Creek superintendency	Crow Creek	H. P. Marble.
Crow Creek (bdg.)		
Immaculate Conception (Catholic)	Stephan	
Flandreau (nonreservation, bdg.)	Flandreau	C. F. Peirce.
Lower Brule (bdg.)	Lower Brule	E. M. Garber.
Pierre (nonreservation, bdg.)	Pierre	C. J. Crandall.
Pine Ridge superintendency[1]	Pine Ridge	H. M. Tidwell.
Pine Ridge (bdg.)		
Holy Rosary (Catholic mission)		
Schools Nos. 1, 4, 5, 6, 7, 9 to 30, inclusive (day)		
Rapid City (nonreservation, bdg.)	Rapid City	J. F. House.
Rosebud superintendency[2]	Rosebud	C. C. Covey.
Rosebud (bdg.)		
St. Mary's (mission bdg.; Episcopal)		
St. Francis (mission bdg.; Catholic)		
White Lake (day)	Rosebud	
White Thunder (not in operation, abolished)		
Wood (day)		
St. Mary's (Episcopal mission)	Mission	
St. Francis's (Catholic mission)	Spring Creek district	
Sisseton (bdg.)	Sisseton	J. L. Suffecool.
Springfield (nonreservation; bdg.)	Springfield	Miss M. V. Gaither.
Yankton (bdg.)	Wagner	A. W. Leech.

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[1] See Supp. No. 1.

[2] Supp. No. 2.

Name of school.	P. O. address.	Superintendent.
UTAH.		
Goshute (not in operation)	Ibapah	Amos R. Frank.
Shivwits (day)	Santa Clara	O. Humbargar.
Uintah (bdg.)	Fort Duchesne	A. H. Kneale.
WASHINGTON.		
Colville superintendency	Nespelem	Fred C. Morgan.
School No. 1 (day)	Corada	
School No. 3 (day)	Nespelem	
School No. 4 (day)	Daisy	
School No. 9	Keller	
Sacred Heart (Catholic mission)		
St. Mary's (Catholic mission)		
Cushman superintendency	Tacoma	E. H. Hammond.
Cushman (nonreservation; bdg.)	do	
Chehalis (day)	do	
Jamestown (day)	Dungeness	
Port Gamble (day)	Port Gamble	
St. George's (Catholic mission)	Tacoma	
Neah Bay superintendency	Neah Bay	Dr. C. L. Woods.
Neah Bay (day)	do	
Quileute (day)	Mora	
Spokane superintendency	Wellpinit	O. C. Upchurch.
School No. 1 (day)	Miles	
School No. 2 (day)	Wellpinit	
School No. 8 (day)	Ford	
Taholah superintendency	Taholah	Dr. O. O. Benson.
Taholah (day)	do	
Queets River (day)	do	
Tulalip superintendency	Tulalip	Dr. C. M. Buchanan.
Tulalip (bdg.)	do	
Lummi (day)	Marietta	
Swinomish (day)	La Conner	
Yakima (bdg.)	Fort Simcoe	Don M. Carr.
WISCONSIN.		
Hayward superintendency	Hayward	H. J. McQuigg.
Hayward (nonreservation, bdg.)	do	
Lac Courte Oreille (day)	Reserve	
Keshena superintendency	Keshena	E. A. Allen.
Keshena (bdg.)	do	
Neopit (day)	Neopit	
St. Joseph's (Catholic mission)	Keshena	
St. Anthony's (Catholic mission)	Neopit	
Lac du Flambeau (bdg.)	Lac du Flambeau	J. W. Balmer.
La Pointe superintendency	Ashland	P. S. Everest.
Odanah Mission (Catholic)	Odanah	
St. Mary's (Catholic mission)	do	
Oneida superintendency	Oneida	Jos. C. Hart.
Oneida (bdg.)	do	
Adventist Mission	do	
Hobart Mission (Episcopal)	do	
Red Cliff superintendency	Bayfield, Wis	John W. Dady.
Red Cliff (day)	do	
Bayfield (Holy Family) (Catholic mission)	do	
Tomah (nonreservation; bdg.)	Tomah	L. M. Compton.
WYOMING.		
Shoshone superintendency	Fort Washakie	E. A. Hutchinson.
Shoshone (bdg.)	do	
Arapaho (day)	do	
St. Stephen's (Catholic mission)	St. Stephen's	
Shoshone (Episcopal mission)	Wind River	
St. Michael's (mission bdg.; Protestant Episcopal)		

NOTE.—In the foregoing list, "day" indicates a day school and "bdg." a boarding school.

SUPPLEMENT No. 1.—PINE RIDGE DAY SCHOOLS.

No. 1	Agency.
No. 4	10 miles north of agency on White Clay Creek.
No. 5	20 miles northwest of agency mouth of White Clay Creek.
No. 6	25 miles northwest of agency on White River.
No. 7	15 miles northeast of agency on Wounded Knee Creek.
No. 9	18 miles north-northeast of agency on Wounded Knee Creek.
No. 10	22 miles north-northeast of agency on Wounded Knee Creek.
No. 12	32 miles north of agency on Wounded Knee Creek.
No. 13	35 miles north-northeast of agency on Porcupine Creek.
No. 14	52 miles east of agency on Lake Creek.
No. 15	30 miles north-northeast of agency on Porcupine Creek.
No. 16	25 miles northeast of agency on Porcupine Creek.
No. 17	40 miles northeast of agency on American Horse Creek.
No. 18	45 miles north-northeast of agency on Medicine Root Creek.
No. 19	40 miles northeast of agency on Little Wound Creek.
No. 20	45 miles northeast of agency on No Flesh Creek.
No. 21	50 miles eastnortheast of agency on Corn Creek.
No. 22	65 miles northeast of agency on Bear Creek.
No. 23	60 miles north-northeast of agency on Potato Creek.
No. 24	80 miles northeast of agency on Lone Tree Creek.
No. 25	15 miles northwest of agency on White Clay Creek.
No. 26	30 miles north of agency on White River.
No. 27	6 miles north of agency on White Clay Creek.
No. 28	5 miles east of agency on Wolf Creek.
No. 29	50 miles northeast of agency on Medicine Root Creek.
No. 30	On Porcupine Creek.

SUPPLEMENT NO. 2.—ROSEBUD DAY SCHOOLS.

Blackpipe	30 miles northwest of agency on Blackpipe Creek.
Corn Creek	37 miles northwest of agency at junction of Blackpipe and Corn Creek.
Cut Meat	13 miles northeast of agency on Cut Meat Creek.
He Dog's Camp	18 miles northwest of agency on branch of Cut Meat Creek.
Ironwood	8 miles west of agency.
Little Crow's	40 miles northeast of agency; 60 miles north Valentine, Nebr.; 75 miles southwest Chamberlain, S. Dak.
Milk's Camp	100 miles east of agency on Ponca Creek.
Oak Creek	30 miles northeast of agency; 45 miles north of Valentine, Nebr.
Pine Creek	28 miles northeast of agency on Little White River.
Red Leaf	25 miles northwest of agency.
Rosebud Day	At agency.
Spring Creek	17 miles southwest of agency.
Upper Cut Meat	16 miles northwest of agency on Cut Meat Creek.
Whirlwind Soldier	55 miles northeast of agency on Oak Creek, 4 miles south of White River.
White Lake	Lake View, S. Dak.
Wood	35 miles northeast of agency.

3. Columbia Institution for the Deaf, Washington, D. C., Percival Hall, president.
4. Howard University, Washington, D. C., Stephen M. Newman, A. M., D. D., president.
5. Territory of Hawaii. (See pages 36, 97, 122, 191.)
6. Territory of Alaska. (See pages 35, 40, 43, 190.)

VI.—DEPARTMENT OF AGRICULTURE: EDUCATIONAL ACTIVITIES.

Through the States Relations Service (A. C. True, director) affiliates with the State agricultural colleges and experiment stations, under the acts of Congress granting funds to these institutions for agricultural experiment stations and cooperative extension work in agriculture and home economics, and in carrying out the provisions of acts of Congress making appropriations to this department for farmers' cooperative demonstration work, investigations relating to agricultural schools, farmers' institutes, and home economics and the maintenance of agricultural experiment stations in Alaska, Hawaii, Porto Rico, and Guam.

VII.—DEPARTMENT OF LABOR: EDUCATIONAL ACTIVITIES.

A. Bureau of Naturalization, Richard K. Campbell, commissioner; Raymond F. Crist, deputy commissioner. Cooperates with public schools in the education of immigrant adults. The public schools in 1,754 communities have so far "cast their lot with the bureau in a national citizenship-building undertaking."

B. Information and Education Service. (Acts largely as a means for circulating patriotic propaganda in connection with the Labor Department activities, and more specifically, the U. S. Employment Service program):

(1) Education work. Prof. Davis R. Dewey, in charge of critical survey of all publicity work of division.

(2) Industrial plants. F. M. Hawley, in charge of inspirational work in industrial plants.

(3) Periodicals. Mrs. E. C. Taylor, in charge of providing newspapers and magazines with feature stories and other literature in regard to war labor activities.

(4) Speakers' Service: (*a*) To send speakers into the field provided with literature and speeches and general information for presentation to the public through public halls, theaters, etc. (*b*) Movies and correspondence. (*c*) To advertise all United States Employment Service activities, by means of inspirational posters, etc.

(5) Training and dilution service, Charles T. Clayton, chief (established to meet the needs created by inducting untrained workers into factories requiring specially trained persons). Its purposes are: (1) To ascertain the best methods used in various plants and industrial establishments for training workers to do specific work; (2) to ascertain needs for such training of workers; (3) to provide information on this subject to the various plants, industrial establishments, and employees; (4) to promote such training wherever it is necessary or desirable; (5) to inspect operation of such training and report thereon; (6) to cooperate with the United States Employment Service in all of this work; (7) to take up problem of dilution if necessary; i. e., to reorganize work so that a large part formerly handled by skilled workmen may be handled by unskilled workmen.

VIII.—INDEPENDENT ESTABLISHMENTS: EDUCATIONAL ACTIVITIES.

1. Library of Congress, Herbert Putnam, librarian. (While not a lending library, but primarily and essentially a reference library, the Library of Congress maintains an inter-library loan system, by which special service is rendered to scholarship by the lending of books to other libraries for the use of investigators engaged in serious research.)

2. Smithsonian Institution, Charles D. Walcott, secretary:

(*a*) United States National Museum (including the National Gallery of Art), Richard Rathbun, assistant secretary in charge); (*b*) Bureau of American Ethnology, J. Walter Fewkes, chief; (*c*) National Academy of Sciences, Charles D. Walcott, president; (*d*) National Research Council, George E. Hale, chairman; (*e*) American Historical Association.

3. The Panama Canal. (See p. 35.)

4. Civil Service Commission.

5. Federal Board for Vocational Education:[1] Members—David F. Houston, Secretary of Agriculture, chairman; William C. Redfield, Secretary of Commerce; William B. Wilson, Secretary of Labor; P. P. Claxton, Commissioner of Education; James P. Munroe, vice chairman; Charles A. Greathouse; Arthur E. Holder.

Executive staff—C. A. Prosser, director; Layton S. Hawkins, chief of the vocational education division; Charles H. Winslow, chief of the research division; T. B. Kidner, acting chief of the rehabilitation division; Lewis H. Carris, assistant director for industrial education; Josephine T. Berry, assistant director for home economics education; F. G. Nichols, assistant director for commercial education; W. G. Hummel, assistant director for agricultural education; E. Joseph Aronoff, secretary; C. E. Alden, chief clerk; H. F. Dolan, disbursing officer; D. J. Richardson, legal adviser.

Washington office—601 E Street NW.

Regional offices—New York City, room 915, 145 West Forty-fifth Street; Atlanta, Ga., 1227 Candler Building; Indianapolis, Ind., 1012 Merchants Bank Building; Kansas City, Mo., 316 Grand Avenue Temple Building; San Francisco, Cal., 546 Monadnock Building.

6. Council of National Defense: Committee on Labor: Welfare Work Committee: (1) Industrial safety (studying accident prevention, etc.); L. R. Palmer, chairman. (2) Sanitation (covering a wide field of activities in shop, industrial committees and public), Dr. Wm. A. Evans, chairman. (3) Industrial training for the war emergency (studying advisability and methods of training for unskilled workers. Working with but not supplanted by Training and Dilution Service of Department of Labor. See under Vestibule schools). (4) Recreation (studying need for and best methods of introducing recreational activities in communities, etc.), Dr. George J. Fisher, chairman. (5) Public education in health matters (supplementing work of Public Health Service; largely devoted to propaganda work), Dr. A. H. Doty, chairman (6) Standard guides for employers, A. Parker Davis, chairman.

Section on industrial training for the war emergency of the Committee on Welfare Work, H. E. Miles, chairman of section.

Training departments or vestibule schools—

Recording and Computing Machines Co., C. U. Carpenter, C. P., Dayton, Ohio.
Curtiss Aeroplane Corporation, J. W. Russell, Director of Training, Buffalo, N. Y.
Wright-Martin Aircraft Corporation, J. F. Johnson, Director of Training, New Brunswick, N. J.
Wright-Martin Aircraft Corporation, J. F. Johnson, Director of Training, Long Island City, N. Y.
Nordyke & Marmon Company, Charles Baker, Director of Training, Indianapolis, Ind.
Packard Motor Car Company, F. F. Beall, Vice President, Detroit, Mich.

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[1] The Federal Board for Vocational Education has been charged with the responsibility of reeducating disabled soldiers and sailors. It is the intention of the board to use the resources of existing institutions and, so far as practicable, to train men in institutions as near as possible to their homes. The board is limited in its work of vocational education to beneficiaries of the war risk insurance act. Men are received for training after they are discharged from the hospitals and from the Army. As rapidly as the War Risk Insurance Bureau furnishes names, the board endeavors to secure training arrangements for those who need education and can profit by it.

Lincoln Motor Company, J. M. Eaton, Assistant to President, Detroit, Mich.
Norton Grinding Company, John C. Spence, Superintendent, Worcester, Mass.
Gillette Safety Razor Company, Ralph E. Thompson, Factory Superintendent, Boston, Mass.
Royal Typewriter Company, Charles B. Cook, Vice President, Hartford, Conn.
Scoville Manufacturing Company, Charles M. Warner, Director of Training, Waterbury, Conn.
Remington Arms Company, Bridgeport, Conn.
Bullard Engineering Company, Bridgeport, Conn.
The H. E. Harris Engineering Company, H. E. Harris, President, Bridgeport, Conn.
Trego Motor Company, E. M. Bixly, Director of Training, New Haven, Conn.
Winchester Repeating Arms Company, L. O. Pethick, Director of Training, New Haven, Conn.
Taft-Peirce Manufacturing Company, Charles K. Gurney, Supervisor, Woonsocket, R. I.
Brown & Sharpe Company, Providence, R. I.
Crompton & Knowles Loom Works, H. E. Blanchard, Director of Training, Worcester, Mass.
American Steel & Wire Company, Charles R. Sturtevant, Worcester, Mass.
Norton Company, Worcester, Mass.
John Bath & Company, Worcester, Mass.
Graton & Knight Company, F. W. Goodrich, General Superintendent, Worcester, Mass.

(Note: The following companies in Worcester have taken over for the summer the Worcester Trade School for the upgrading of their mechanics: Morgan Construction Company, Norton Grinding Company, Norton Company, Leland Gifford Company, Whitcomb Blaisdell Machine Tool Company.)

Blanchard Machine Company, W. W. Blackman, Superintendent, Cambridge, Mass.
E. W. Bliss Company (torpedo factory), H. E. Blanchard, Chairman Committee on Foremen, Brooklyn, N. Y.
Ford Instrument Company, S. L. Smith, Director of Training, New York City.
Pierce-Arrow Company, Daniel B. Webster, Factory School Instructor, Buffalo, N. Y.
King Sewing Machine Company, William D. Dashner, Director of Training, Buffalo, N. Y.
New York Air Brake Company, George W. G. Poole, Director of Training, Watertown, N. Y.
Seneca Falls Manufacturing Company, E. R. Smith, Factory Manager, Seneca Falls, N. Y.
Savage Arms Company, R. H. Wallace, Personnel Superintendent, Utica, N. Y.
Henry Disston & Sons, A. S. Carter, Director of Training, Philadelphia, Pa.
Fayette R. Plumb (Inc.), William D. Plumb, Factory Manager, Philadelphia, Pa.
Hess Bright Manufacturing Company, Philadelphia, Pa.
Roberts Filter Manufacturing Company, Philadelphia, Pa.
Remington Arms Company, Eddystone Plant, Philadelphia, Pa.
Naval Aircraft Factory, League Island, E. J. Schoettle, Director of Training, Philadelphia, Pa.
American International Shipbuilding Company, Hog Island, E. W. Miller, Director of Training, Philadelphia, Pa.
Newton Machine Tool Company, Nicholas P. Lloyd, Philadelphia, Pa.
Warren Webster Company, Mr. Fitts, Manager, Philadelphia, Pa.
L. H. Gilmer Company, Mr. Disston, Employment Manager, Philadelphia, Pa.
Burke Electric Company, Gustave Faure, Director of Training, Erie, Pa.
Bethlehem Steel Company, G. T. Fonda, Bethlehem, Pa.
J. G. Brill Company, R. B. Liddell, General Superintendent, Philadelphia, Pa.
Lanston Monotype Machine Company, Philadelphia, Pa.
Leeds & Northrup Company, W. M. C. Kimber, Vice-President, Philadelphia, Pa.
David Lupton Sons Company, Philadelphia, Pa.
North American Motors Company, George Lees, Secretary and Works Manager, Pottstown, Pa.
Standard Aircraft Corporation, Maurice J. Sullivan, Director of Training, Elizabeth, N. J.
Snead & Company Iron Works, David Clark, Carl Schultz, Jersey City, N. J.
Spicer Manufacturing Company, Thomas C. Vail, Superintendent, Plainfield, N. J.
International Motors Company, L. S. Ayer, Factory Manager, Plainfield, N. J.
Woodbury Bag and Loading Company, H. J. Lamborn, Woodbury, N. J.
Barbour Flax Spinning Company, Robert Barbour, President, Paterson, N. J.
American Bronze Company, Philadelphia, Pa.
American Tool Works Company, Cincinnati, Ohio.
Lodge & Shipley Machine Tool Company, Cincinnati, Ohio.
Cincinnati Milling Machine Company, Frederick A. Geier, President, Cincinnati, Ohio.
Cincinnati Grinder Company, Arthur C. Hoefinghoff, Director of Training, Cincinnati, Ohio.
Cincinnati Planer Company, Cincinnati, Ohio.
Cincinnati Bickford Tool Company, D. C. Klausmeyer, Director of Training, Cincinnati, Ohio.
Oakley Machine Tool Company, Albert A. Thayer, Treasurer, Cincinnati, Ohio.
Buckeye Twist Drill Company, J. F. Meyers, Superintendent, Alliance, Ohio.
Morgan Engineering Company, S. P. Hall, Employment Manager, Alliance, Ohio.
National Cash Register Company, A. C. Lampman, Director of Training, Dayton, Ohio.
Ohmer Fare Register Company, A. J. Haas, Employment Manager, Dayton, Ohio.
The Timken Roller Bearing Company, F. T. Mackay, Employment Manager, Canton, Ohio.
Joseph & Feiss Company, May Thomsen, Employment Department, Cleveland, Ohio.

ıler Safe Company, P. G. Kette, Hamilton, Ohio.
ague Electric Company.
ne Wire Company, H. T. Dyott, President, Rome, N. Y.
d Motor Company, S. S. Marquis, Director of Training, Detroit, Mich.
ıg Manufacturing Company, Detroit, Mich.
debaker Corporation, F. A. Brenner, Plant Superintendent, Detroit, Mich.
ay Process Company, E. R. Maurer, Superintendent of Shops, Detroit, Mich.
lillac Motor Car Company, Detroit, Mich.
gan & Wright Company, J. H. Mulloy, Detroit, Mich.
roit Steel Products Company, R. S. Drummond, Detroit, Mich.
ıeral Aluminum & Brass Manufacturing Company, Detroit, Mich.
roughs Adding Machine Company, R. B. Fleming, Supervisor of Employment, Detroit, Mich.
lge Brothers, F. J. Heyms, Works Manager, Detroit, Mich.
roit Lubricator Company, G. B. Duffield, Superintendent, Detroit, Mich.
ıken Detroit Axle Company, W. L. McKay, Factory Manager, Detroit, Mich.
el Products Company, C. W. Miller, General Manager, Cleveland, Ohio.
ıotype Company, Edward Schildhauer, President, Indianapolis, Ind.
skellite Manufacturing Company, E. K. Pritchett, Purchase Manager, Grand Rapids, Mich.
ublic Motor Truck Company, J. W. Wilson, Director of Training, Alma, Mich.
ırks Withington Company, William Parker, Vice-President, Jackson, Mich.
ıois Tool Works, J. D. Sherman, Factory Manager, Chicago, Ill.
ion Special Machines Company, H. B. Johnson, Factory Manager, Chicago, Ill.
ɔs. A. Edison (Inc.), Orange, N. J.
stern Cartridge Company, J. L. Donnelly, Secretary, East Alton, Ill.
ependent Pneumatic Tool Company, F. B. Hamerly, Works Manager, Aurora, Ill.
mond Chain & Manufacturing Company, L. W. Wallace, Indianapolis, Ind.
ıeral Electric Company, E. H. Barnes, Superintendent, Fort Wayne, Ind.
vling & Harnischfeger Company, Milwaukee, Wis.
ıerican Optical Company, Royal Parkinson, Employment Manager, Southbridge, Mass.
le & Towne Manufacturing Company, Jos. A. Horne, Vice President, A. F. Bardwell, Stamford, Conn.
ıy & Davis (Inc.), T. M. Allen, Assistant General Superintendent, Boston, Mass.
nchard Machine Company, Geo. E. Hill, Director of Training, Cambridge, Mass.
stinghouse Electric Company, East Pittsburgh, Pa.
lton Machine Tool Company, Cincinnati, Ohio.
omobile Company of America, H. H. Edge, Factory Manager, Bridgeport, Conn.
llys-Morrow Company, J. E. Morrow, Secretary and General Manager, Elmira, N. Y.
ndard Parts Company, H. E. Clay, Plant Manager, Cleveland, Ohio.
derwood Typewriter Company, C. D. Rice, Factory Manager, Hartford, Conn.

he following firms in Worcester, Mass., are using the vestibule principle in special efforts at training killed men in their shops: The Heald Machine Company; Bradley Car Works; Reed Prentice Com-
y; Sleeper & Hartley (Inc.); Rice Barton & Fales.

ational League of Women Workers: National Service Course. Columbia University, New York, N. Y. aining course for girls' recreational work.)

War Industries Board: Employment Management Section, Captain Boyd Fisher, Director. War ergency Courses in Employment Management, E. D. Jones, Director of Course Materials.

he Government courses on employment management are conducted under the general guidance of a t committee, composed of representatives of various departments, and under the direct supervision of aff organized as the Employment Management Section of the War Industries Board.

he instruction is given at leading educational and industrial centers and, for the most part, in coopera-
with institutions of higher education under the auspices of—

) The War Department—Ordnance Department; Quartermaster General; General Staff, Committee Education; Adjutant General's Office, Committee on Classification. (2) The Navy Department. The Department of Labor—War Labor Policies Board; United States Employment Service; Woman-
ndustry Service. (4) The War Industries Board. (5) The United States Shipping Board, Emergency t Corporation. (6) Chamber of Commerce of the United States.

cooperation with:

Boston—Harvard University; Massachusetts Institute of Technology; Boston University. *b.* New
k—Columbia University; Bureau of Municipal Research. *c.* Rochester—University of Rochester.
'ittsburgh—Carnegie Institute of Technology; University of Pittsburgh. *e.* Seattle, Wash.—Univer-
of Washington. *f.* Berkeley, Cal.—University of California. *g.* Cincinnati—University of Cincinnati.
leveland—Case School of Applied Science; Chamber of Commerce.

United States Shipping Board—Merchant Marine.

) *Navigation Schools for Training Deck Officers:* Massachusetts Institute of Technology, Cambridge, Mass., dley James, Instructor; Council Chamber, City Building, Rockland, Me., Capt. Charles R. Magee, ructor; Council Chamber, City Hall, Portland, Me., Capt. Frank A. Wilson, Instructor; Pratt Institute, oklyn, N. Y., Capt. John Bond, Instructor; Seamen's Church Institute, 25 South Street, New York, Y., Capt. Robert Huntington, Instructor; Uttmak's Academy, 8 State Street, New York, N. Y., Capt. Fritz Uttmark, Instructor; Dickinson High School, Newark and Palisade Avenue, Jersey City, N. J., Capt. Alfred B. Wilson, Instructor; Engineering Building, Philadelphia, Pa., Samuel Goodwin Barton, Instructor; Customhouse, Baltimore, Md., J. W. Lindau, Instructor; Central Y. M. C. A. Building, Granby and Freemason Streets, Norfolk, Va., John H. Stansbury, Instructor; Board of Trade Building, Tampa, Fla., Niel Storter, Instructor; Conti and Royal Streets, New Orleans, La., Capt. Ernest E. Bonnar Drake, Instructor; Ferry Building, San Francisco, Cal., Dr. Sturla Einarson, Instructor; Chamber of Commerce, Los Angeles, Cal., Capt. Hugo C. Frerichs, Instructor; University of Washington, Seattle, Wash., J. E. Gould, Instructor; Federal Building, Tacoma, Wash., Prof. Charles D. Shane, Instructor; Portland Railway Light & Power Co. Building, First and Alder Streets, Portland, Oreg., Dr. Arthur R. Williams, Instructor; Federal Building, sixth floor, Chicago, Ill., Dr. Oliver J. Loe, Instructor; Case School of Applied Science, Cleveland, Ohio, Petter G. Petterson, Instructor; 352 Post-Office Building, Detroit, Mich., Donald Wise, Instructor.

(2) *Engineering Schools for Training Engineer Officers:* Massachusetts Institute of Technology, Cambridge, Mass., Prof. Edward F. Miller, Instructor; Dickinson High School, Newark and Palisade Avenue, Jersey City, N. J., L. R. Smith, Instructor; Philadelphia Bourse Building, Philadelphia, Pa., Clinton E. Shaw, Instructor; Johns Hopkins University, Baltimore, Md., William J. Dana, Instructor; Pratt Institute, Brooklyn, N. Y., Samuel S. Edmand, Instructor; Seamen's Church Institute, 25 South Street, New York, N. Y., Capt. Robert Huntington, Instructor; Tulane University of Louisiana, New Orleans, La., Prof. James M. Robert, Instructor; University of California, Berkeley, Cal., D. W. Dickie, Instructor; University of Washington, Seattle, Wash., Prof. Henry D. Suzzallo, Instructor; Case School of Applied Science, Cleveland, Ohio, Prof. Frederick H. Vose, Instructor; Armour Institute of Technology, Chicago, Ill., Prof. George F. Gebhardt, Instructor.

(3) *Institutes for Purpose of Training Deck and Engineer Crews for the Merchant Marine:* (*a*) Training ships in operation under the supervision of Capt. Charles E. Littlefield, Receiving Station, Sea Training Department, U. S. S. B. Recruiting Service, 172 Border Street, East Boston, Mass. S. S. *Calvin Austin*, S. S. *Governor Dingley*, S. S. *Governor Cobb*. (*b*) Training ship under the supervision of Capt. Isaac N. Hibberd, 369 Pine Street, San Francisco, Cal. S. S. *Iris*. (*c*) Training ships under the supervision of William J. Grambs, 860 Stuart Building, Seattle, Wash. S. S. *Chippewa*, S. S. *Iroquois*. (*d*) Training ship under the supervision of Capt. Irving L. Evans, Room 501, Marion Building, 1276 West Third Street, Cleveland, Ohio. S. S. *Missouri*. (*e*) Training ship under the supervision of Capt. Ernest E. B. Drake, Conti and Royal Streets, New Orleans, La. *Mandeville*.

9. United States Shipping Board: Emergency Fleet Corporation, Education and Training Section, Louis E. Reber, Director.

(1) *Shipyards having Training Departments:*[1] American International Corporation, Hog Island, Philadelphia, Pa., E. W. Miller, Director; Atlantic Corporation, Portsmouth, N. H., E. W. Kempton, Director; Baltimore D. D. & S. B. Co., Baltimore, Md., Thos. Holston, Director; Bayles Shipyards, (Inc.), Port Jefferson, Long Island, N. Y., T. G. Hawley, Director; Bethlehem S. B. Corporation, Fore River, Quincy, Mass., O. H. Tomlin, Director; Bethlehem S. B. Corporation, Harlan Plant, Wilmington, Del., G. A. Worn, Director; Bethlehem S. B. Corporation, Sparrows Point Plant, Baltimore, Md., W. T. Butler, Director; Chester S. B. Co., Chester, Pa., J. W. L. Hale, Director; Doullut Williams, New Orleans, La., H. B. Schofield, Director; Downey S. B. Co., New York, N. Y., J. M. Carver, Director; Federal S. B. Co., Hackensack River, N. J., O. Downs, Director; Housatonic S. B. Co., Stratford, Conn., C. D. Wallach, Director; Jahncke S. B. Corporation, New Orleans, La., M. F. Chatellier, Director; Johnson Shipyards Corporation, Mariners Harbor, N. Y., not appointed; Manitowoc S. B. Co., Manitowoc, Wis., Cyrus A. Casey, Director; Maryland S. B. Co., Sollers Point, Md., J. M. Ferguson, Director; McDougall-Duluth Co., Duluth, Minn., W. S. Covey, Director; Merchants S. B. Co., Bristol, Pa., M. C. Miller, Director; Merrill-Stevens S. B. Corporation, Jacksonville Plant, Jacksonville, Fla., C. W. Hesch, Director; Mobile S. B. Co., Mobile, Ala., H. K. Maitland, Director; Moore S. B. Co., Oakland, Cal., Chas. Wentwort Hill, Director; Newburgh Shipyards, (Inc.), Newburgh, N. Y., W. S. Wells, Director; Newport News, S. B. & D. D. Co., Newport News, Va., W. B. Ashe, Director; Pusey & Jones, New Jersey Plant, Gloucester, N. J., H. V. Mason, Director; Pusey & Jones, Pennsylvania Plant, Gloucester, N. J., H. V. Mason, Director; Pusey & Jones, Wilmington, Del., W. W. Spiegelhalter, Director; Saginaw S. B. Co., Saginaw, Mich.; Standard S. B. Co., Shooters Island, Long Island, N. Y., G. B. Spencer, Director; Staten Island S. B. Co., Port Richmond, N. Y., J. H. Davidson, Director; Submarine Boat Corporation, Newark, N. J., H. H. Tukey, Director; Sun S. B. Co., Chester, Pa., Wm. F. Wright, Director; Tampa S. B. & Engr. Co., Tampa, Fla., Max Kreher, Director.

(2) *Shipyards Having Instructors' Training Centers:*[2] American International Corporation, Hog Island, Philadelphia, E. M. Longfield, Director; American S. B. Co., Brunswick Plant, Brunswick, Ga., R. E. Ellis, Director; American S. B. Co., Detroit Plant, Detroit, Mich., (B. L. Affleck),[3] Director; Atlantic

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[1] A Training Department is maintained by a shipyard for the teaching of shipyard crafts to green workmen. The teaching staff of a Training Department is trained under the supervision of the Educational and Training Section, but is paid by the shipyard.

[2] Instructor training centers are maintained for the purpose of teaching skilled workmen how to impart their knowledge to others, and upon completion of their work they become instructors in the training departments at their respective yards. The teaching staff of a training center is composed of the regular staff instructors of the Education and Training Section.

[3] Names of local directors in parentheses indicate the men formerly in charge of centers which have now completed their work.

Corporation., Portsmouth, N. H., W. B. Henry, Director; Doullut Williams, New Orleans, La., E. L. Baird, Director; Downey S. B. Corporation, New York, N. Y., (J. A. Fisher), Director; Federal S. B. Corporation, Hackensack River, N. J., (W. A. Kreider), Director; Groton Iron Works, Groton, Conn., E. W. Beck, Director; Craig S. B. Co., Long Beach, Cal., M. J. Kane, Director; Hanlon D. D. & S. B. Co., Oakland, Cal., F. W. Wetmore, Director; Housatonic S. B. Co. (Inc.), Stratford, Conn., (E. A. Krause), Director; Liberty S. B. Co., Wilmington, N. C., A. F. Dodge, Director; Manitowoc S. B. Co., Manitowoc, Wis., D. E. Garver, Director; McDougall-Duluth Co., Duluth, Minn., (T. F. Fisher), Director; Maryland S. B. Co., Sollers Point, Baltimore, Md., E. D. Dee, Director; Merchants S. B. Corporation Plant, Bristol, Pa., C. A. Burridge, Director; Merrill-Stevens S. B. Corporation Jack Plant, Jacksonville, Fla., H. W. Clarke, Director; Mobile S. B. Co., Mobile, Ala., W. E. Fiske, Director; Moore S. B. Co., Oakland, Cal., H. B. Adams, Director; Newport News S. B. & D. D. Co., Newport News, Va., (C. M. Bennett), Director; Newburgh Shipyards (Inc.), Newburgh, N. Y., M. G. Twichell, Director; Northwest Steel Co., Portland; Oreg., Newton Van Dalsen, Director; Pacific Coast S. B. Co., San Francisco, Cal., N. D. Cook, Director; Pensacola S. B. Co., Pensacola, Fla., W. E. Fiske, Director; Shattuck S. B. Corporation, Piscatauqua River, Portsmouth, N. H., (M. J. Moriarty), Director; Standard S. B. Corporation, Mariners' Harbor, Staten Island, N. Y., (A. W. Dodge), Director; Staten Island S. B. Co., Port Richmond, N. Y., Chas. R. Bennett, Director; Submarine Boat Corporation, Newark, N. J., Jay Fiske, Director; Sun S. B. Co., Chester, Pa., W. A. Krieder, Director; Tood S. B. & Constr. Co., Tacoma, Wash., B. L. Affieck, Director; Union Construction Co., Oakland, Cal., F. W. Alder, Director; Virginia S. B. Co., Alexandria, Va., H. S. Hall, Director; Western Pipe & Steel Co., San Francisco, Cal., P. D. Croney, Director.

10. United States Geographic Board, Andrew Braid, chairman.
11. Commission of Fine Arts, Charles Moore, chairman.

IX.—PRINCIPAL STATE SCHOOL OFFICERS.[1]

States and officers.	Official designation.	Address.
Alabama:		
Spright Dowell	State superintendent of education	Montgomery.
James N. Gunnels	Chief clerk	Do.
R. E. Tidwell	Director of institutes	Do.
J. B. Hobdy	Rural-school agent	Do.
J. L. Sibley	....do	Do.
John B. Clark	Secretary State board of teachers' examiners	Do.
J. S. Thomas	High-school inspector	University.
W. C. Blasingame	....do	Auburn.
Alaska:		
Lester D. Henderson	Commissioner of education	Juneau.
Arizona:		
C. O. Case	State superintendent of public instruction	Phoenix.
Frank Dykes	Assistant superintendent	Do.
I. Colodny	State director of vocational education	Do.
Arkansas:		
J. L. Bond	State superintendent of public instruction	Little Rock.
E. H. Shinn	Deputy	Do.
N. M. Whaley	Assistant deputy	Do.
A. B. Hill	Supervisor of secondary schools	Do.
J. A. Presson	State agent, rural schools for Negroes	Do.
California:		
Will C. Wood	Superintendent of public instruction	Sacramento.
M. G. Hyatt	Deputy superintendent	Do.
	Assistant superintendent and commissioner of secondary schools.	Do.
Margaret Schallenberger McNaught.	Assistant superintendent and commissioner of elementary schools.	Do.
Edwin R. Snyder	Assistant superintendent and commissioner of vocational and industrial education.	Do.
Canal Zone:		
A. R. Lang	Superintendent of schools	Balboa Heights.
F. X. Karrer	Supervisor of grades	Do.
Alice Alexander	....do	Do.
Colorado:		
Mrs. Mary C. C. Bradford	State superintendent of public instruction	Denver.
Alice B. Clark	Deputy State superintendent	Do.
Connecticut:		
Charles D. Hine	Secretary of State board of education	Hartford.
H. C. Morrison	Assistant secretary State board of education	Do.
Morton Snyder	High-school inspector	Do.
F. J. Trinder	Trade-school supervisor	New Britain.
Delaware:		
A. R. Spaid	State commissioner of education	Dover.
L. C. Armstrong	State supervisor of agriculture	Do.
District of Columbia:		
E. L. Thurston	Superintendent of schools	Washington.
S. E. Kramer	Assistant superintendent	Do.
R. C. Bruce	....do	Do.

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[1] For other officers of State vocational boards see pp. 149-172.

IX.—PRINCIPAL STATE SCHOOL OFFICERS—Continued.

States and officers.	Official designation.	Address.
Florida:		
W. N. Sheats	State superintendent of public instruction	**Tallahassee.**
R. L. Turner	State inspector of rural schools	**Inverness.**
Shelton Phillips	do	**Williston.**
W. S. Cawthon	State high-school inspector	**Gainesville.**
Georgia:		
M. L. Brittain	State superintendent of schools	**Atlanta.**
Miss C. S. Parrish	State supervisor of rural schools (North Georgia)	Do.
F. E. Land	State supervisor of rural schools (South Georgia)	**Macon.**
J. O. Martin	State supervisor of rural schools (Middle Georgia)	**Covington.**
M. L. Duggan	Rural-school agent	**Atlanta.**
Joseph S. Stewart	State high-school inspector (University of Georgia).	**Athens.**
J. W. Stephens	State school auditor	**Atlanta.**
George D. Godard	Special supervisor (for Negroes)	**Milner.**
Hawaii:		
Henry W. Kinney	Superintendent of public instruction	**Honolulu.**
Idaho:		
Ethel E. Redfield	State superintendent of public instruction	**Boise.**
Enoch A. Bryan	Commissioner of education	Do.
Illinois:		
Francis G. Blair	State superintendent of public instruction	**Springfield.**
John Calvin Hanna	High-school inspector	Do.
U. J. Hoffman	State supervisor of country and village schools	Do.
W. S. Booth	do	Do.
Indiana:		
Horace Ellis (Linnaeus H. Hines, after March 15).	State superintendent of public instruction	**Indianapolis.**
Benjamin J. Burris	Assistant superintendent	Do.
Robert K. Devricks	Deputy	Do.
J. G. Collicott	Director of vocational education	Do.
Z. M. Smith	Supervisor of agricultural education	Do.
Bertha Latta	Assistant in vocational education	Do.
Oscar H. Williams	High-school inspector	Do.
Fred Gladden	Clerk State board of education	Do.
Bert Morgan	Clerk State Teachers' Retirement Fund Board	Do.
Iowa:		
A. M. Deyoe (P. E. McClennahan, after July 1, 1919).	State superintendent of public instruction	**Des Moines.**
F. D. Joseph	Deputy	Do.
H. C. Hollingsworth	Chief clerk	Do.
M. R. Fayram	Inspector normal training in high schools	Do.
J. A. Woodruff	Inspector rural and consolidated schools	Do.
F. A. Welch	Inspector graded and high schools	Do.
B. W. Hoadley	do	Do.
Kansas:		
Lizzie Wooster	State superintendent of public instruction	**Topeka.**
C. E. St. John	Assistant superintendent	Do.
L. D. Whittemore	Secretary State board of education	Do.
C. C. Brown	High-school supervisor	Do.
O. B. Seyster	do	Do.
Julia M. Stone	Rural-school supervisor	Do.
J. A. Shoemaker	do	Do.
W. S. Sceneder	Chief clerk	Do.
Kentucky:		
V. O. Gilbert	State superintendent of public instruction	**Frankfort.**
A. J. Jolly	Assistant superintendent	Do.
Paul F. Meagher	Chief clerk	Do.
M. F. Pogue	School inspector	Do.
McHenry Rhoads	State supervisor of high schools	**Lexington.**
J. V. Chapman	State supervisor of rural schools	**Frankfort.**
F. C. Button	do	Do.
Lida E. Gardner	State organizer school-improvement leagues and parent-teacher associations.	Do.
Louisiana:		
T. H. Harris	State superintendent of public education	**Baton Rouge.**
C. A. Ives	High-school inspector	Do.
John M. Foote	Chief State rural-school supervisor	Do.
C. F. Trudeau	Assistant high-school inspector	Do.
Leo M. Favrot	State agent of rural schools for Negroes	Do.
P. L. Gilbeau	Supervisor of agricultural schools (State University)	Do.
John R. Conniff	Chairman State teachers' examining committee	Do.
Cleora C. Helbing	State supervisor of home economics departments	Do.
John E. Lombard	State supervisor of trade and industrial schools	Do.
John Dominique	State supervisor of penmanship	**Natchitoches.**
Maine:		
Augustus O. Thomas	State superintendent of public schools	**Augusta.**
G. W. Starkey	Deputy	Do.
Josiah W. Taylor	Agent for secondary education	Do.
H. A. Allan	Agent for rural education	Do.
Florence M. Hale	do	Do.
A. W. Gordon	General agent for schools in unorganized townships.	Do.
P. H. Smiley	Supervisor of practical arts	**Gorham.**
Bernardine Cooney	Supervisor of household arts	**Farmington.**

IX.—PRINCIPAL STATE SCHOOL OFFICERS—Continued.

States and officers.	Official designation.	Address.
Maryland:		
M. Bates Stephens	State superintendent of schools	Baltimore.
G. H. Reavis	Assistant State superintendent	Do.
S. M. North	Supervisor of high schools	Do.
Wm. J. Holloway	Supervisor of rural schools	Do.
J. W. Huffington	Supervisor of colored schools	Do.
H. F. Cotterman	Supervisor of vocational agriculture	Do.
L. A. Emerson	Supervisor of industrial education	Do.
Agnes Saunders	Supervisor of home economics	Do.
William Burdick	Supervisor of physical education	Do.
Isaac L. Otis	Supervisor of entrance to professional schools	Do.
Massachusetts:		
Payson Smith	State commissioner of education	Boston.
Frank W. Wright	Deputy commissioner	Do.
Robert O. Small	do	Do.
Clarence D. Kingsley	Agent for high schools	Do.
Burr F. Jones	Agent for elementary schools	Do.
Walter L. Hamilton[1]	Agent for research	Do.
Robert I. Bramhall	Agent for registration of teachers	Do.
M. Norcross Stratton	Agent for industrial teacher training courses	Do.
Edward C. Baldwin	Business agent	Do.
Michigan:		
Fred L. Keeler	State superintendent of public instruction	Lansing.
John M. Munson	Deputy superintendent	Do.
G. N. Otwell	Assistant superintendent	Do.
W. L. Coffey	do	Do.
Ella M. Smith	County normal supervisor	Do.
Minnesota:		
J. M. McConnell	State superintendent of education	St. Paul.
P. C. Tonning	Assistant	Do.
G. M. Cesander	do	Do.
E. M. Phillips	High-school inspector	Do.
Annie E. Shelland	Rural-school supervisor	Do.
S. A. Challman	Commissioner of school buildings	Minneapolis.
R. B. MacLean	Graded-school inspector	St. Paul.
J. G. Norby	Assistant inspector	Do.
E. T. Critchett	Director teachers' employment bureau and secretary of teachers' retirement fund.	Do.
H. E. Flynn	Supervisor teachers' training departments	Do.
C. C. Swain	Rural-school commissioner	Do.
E. M. Phillips	Director of vocational education	Do.
B. M. Gile	Supervisor of agriculture	Do.
G. A. McGarvey	Supervisor of trades and industrial training	Do.
Mildred Weigley	Supervisor of home economics training	Do.
Mississippi:		
W. F. Bond	State superintendent of public education	Jackson.
J. W. Broom	Assistant superintendent of public education	Do.
J. T. Calhoun	State supervisor rural schools	Do.
J. C. Fant	High-school inspector	University.
Bura Hilbun	State supervisor of Negro schools	Collins.
F. J. Hubbard	Director of secondary agricultural education	Jackson.
Missouri:		
Samuel A. Baker	State superintendent of public schools	Jefferson City.
W. M. Oakerson	Chief clerk	Do.
P. P. Callaway	Teacher-training inspector	Do.
D. W. Clayton	High-school inspector	Do.
F. C. Irion	do	Do.
T. J. Walker	Rural-school inspector	Do.
A. G. Capps	Statistician	Do.
Montana:		
May Trumper	State superintendent of public instruction	Helena.
L. R. Foote	Deputy	Do.
Adelaide M. Ayer	Rural-school inspector	Do.
Charles M. Reinoehl	do	Do.
Nebraska:		
W. H. Clemmons	State superintendent of public instruction	Lincoln.
J. A. Woodard	Deputy superintendent of public instruction	Do.
Cora A. Thompson	Assistant superintendent of public instruction	Do.
A. H. Dixon	Normal-training inspector	Do.
Alice Florer	Rural-school inspector	Do.
Nevada:		
W. J. Hunting	State superintendent of public instruction	Carson City.
Bertha C. Knemeyer	Deputy superintendent of public instruction	Elko.
James V. Comerford	do	Ely.
Chauncey W. Smith	do	Fallon.
George E. McCracken	do	Reno.
G. E. Anderson	do	Las Vegas.
Leslie E. Brigham	State director of vocational education	Carson City.
New Hampshire:		
E. W. Butterfield	State superintendent of public instruction	Concord.
George H. Whitcher	Deputy superintendent of public instruction	Do.
Harriet L. Huntress	do	Do.
James N. Pringle	do	Do.

[1] On leave of absence with Federal Board for Vocational Education.

IX.—PRINCIPAL STATE SCHOOL OFFICERS—Continued.

States and officers.	Official designation.	Address.
New Hampshire—Continued.		
Robert J. Mitchell	Inspector child-labor service	New Market.
F. M. Gunn	do	Newport.
John Bishop	Attendance officer	Concord.
New Jersey:		
Calvin N. Kendall	State commissioner of education	Trenton.
John Enright	Deputy commissioner and in charge of hearings in controversies and disputes.	Do.
A. B. Meredith	Assistant commissioner, secondary education	Do.
Zenos E. Scott	Assistant commissioner, elementary education	Do.
Wesley A. O'Leary	Assistant commissioner, industrial education, including agriculture.	Do.
New Mexico:		
J. Howard Wagner	State superintendent of public instruction	Santa Fe.
John V. Conway	Assistant superintendent of public instruction	Do.
Ruth Coleman Miller	State director of industrial education	Do.
E. D. Smith	Director of vocational agriculture	Do.
George Laugee	Chief clerk	Do.
New York:		
John H. Finley	State commissioner of education	Albany.
Thomas E. Finegan	Deputy commissioner and assistant commissioner for elementary education.	Do.
Augustus S. Downing	Assistant commissioner and director of professional education.	Do.
Charles F. Wheelock	Assistant commissioner for secondary education	Do.
James I. Wyer, jr	Director of State library	Do.
John M. Clarke	Director of science and State museum	Do.
Hiram C. Case	Chief of administration division	Do.
James D. Sullivan	Chief of attendance division	Do.
William R. Watson	Chief of educational extension division	Do.
George M. Wiley	Director of examinations and inspections	Do.
James Sullivan	Director of archives and history division	Do.
Frank H. Wood	Chief of school buildings and grounds	Do.
Frank B. Gilbert	Chief of law division	Do.
Frank K. Walter	Vice director of library school	Do.
Sherman Williams	Chief of school libraries division	Do.
Alfred W. Abrams	Chief of visual instruction division	Do.
Lewis A. Wilson	Director of agricultural and industrial education	Do.
North Carolina:		
J. Y. Joyner	State superintendent of public instruction	Raleigh.
W. H. Pittman	Chief clerk	Do.
L. C. Brogden	State agent for rural schools	Do.
N. C. Newbold	State agent for rural colored schools	Do.
E. E. Sams	Supervisor of teacher training	Do.
N. W. Walker	Inspector of public high schools	Chapel Hill.
T. E. Browne	Supervisor of vocational education	Raleigh.
North Dakota:		
Minnie Neilson	State superintendent of public instruction	Bismarck.
Helen J. Sullivan	Assistant State superintendent	Do.
K. B. Macdonald	Deputy	Do.
E. R. Edwards	High-school inspector	Jamestown.
Edward Erickson	State rural-school inspector	Bismarck.
Ohio:		
F. B. Pearson	Superintendent of public instruction	Columbus.
Vernon M. Riegel	Assistant superintendent of public instruction	Do.
H. D. Swygert	Statistician	Do.
C. E. Oliver	High-school inspector	Do.
E. F. Warner	do	Do.
F. C. Landsittel	do	Do.
George R. Twiss	do	Do.
Samuel L. Eby	do	Do.
W. M. Aiken	do	Do.
Oklahoma:		
Robert H. Wilson	State superintendent of public instruction	Oklahoma.
E. N. Collette	Assistant superintendent	Do.
Fred A. McCaulley	Agricultural assistant	Do.
A. C. Parsons	High-school inspector	Norman.
U. J. Griffith	do	Do.
E. A. Duke	Rural-school supervisor	Do.
W. T. Hunt	Chief clerk	Oklahoma.
Oregon:		
J. A. Churchill	State superintendent of public instruction	Salem.
E. F. Carleton	Assistant State superintendent	Do.
Frank K. Welles	do	Do.
N. C. Maris	Field worker in industrial fairs	Do.
L. P. Harrington	do	Do.
Pennsylvania:		
Nathan C. Schaeffer	State superintendent of public instruction	Harrisburg.
R. McNeal	Deputy superintendent	Do.
Reed B. Teitrick	do	Do.
C. D. Koch	High-school inspector	Do.
William S. Taft	do	Do.
W. M. Denison	do	Do.
James G. Pentz	do	Do.
M. B. King	Director of industrial education	Do.
L. H. Dennis	Director of agricultural education	Do.

IX.—PRINCIPAL STATE SCHOOL OFFICERS—Continued.

States and officers.	Official designation.	Address.
Philippine Islands:		
W. W. Marquardt	Director of education	Manila.
Luther B. Bewley	Assistant director of education	Do.
Camilo Osias	Second assistant director of education	Do.
Carl M. Moore	Superintendent, Department of Mindanao and Sulu.	Do.
Porto Rico:		
Paul G. Miller	Commissioner of education	San Juan.
Carey Hickle	Assistant commissioner	Do.
Ward C. McCroskey	Secretary of department	Do.
M. A. Dacout	General superintendent	Do.
Francisco Vizcarrondo	.....do	Do.
Jose Gonzalez Ginorio	General superintendent of Spanish	Do.
Grace J. Ferguson	Supervisor of home economics	Do.
P. J. McMillan	Supervisor of manual arts	Do.
A. J. Sykes	Supervisor of agriculture	Do.
George A. Harriman	Chief, division of property and accounts	Do.
A. Gonzalez Font	Chief, division of school board accounts	Do.
Rhode Island:		
Walter E. Ranger	Commissioner of public schools	Providence.
Emerson L. Adams	Assistant commissioner	Do.
Charles Carroll	Secretary	Do.
Stephen S. Colvin	Inspector of high schools	Do.
Anne W. Congdon	Library visitor	Do.
South Carolina:		
J. E. Swearingen	State superintendent of education	Columbia.
W. A. Shealy	Assistant State superintendent	Do.
J. A. Stoddard	State high-school inspector	Do.
Lueco Gunter	State supervisor of elementary rural schools	Do.
Geo. D. Brown	State supervisor of mill schools	Do.
R. E. Lee	State school architect	Clemson College.
Verd Peterson	State supervisor of agricultural instruction	Do.
Edna F. Coith	State supervisor of domestic science (Winthrop College).	Rock Hill.
J. H. Brannon	State supervisor of negro schools	Columbia.
South Dakota:		
Fred L. Shaw	State superintendent of public instruction	Pierre.
Charles T. King	Deputy superintendent	Do.
Tennessee:		
S. W. Sherrill	State superintendent of public instruction	Nashville.
A. S. Williams	State high-school inspector	Do.
J. B. Brown	State elementary-school inspector	Do.
S. L. Smith	State rural-school supervisor	Do.
Texas:		
Annie Webb Blanton	State superintendent of public instruction	Austin.
S. H. Whitley	First assistant State superintendent	Do.
E. G. Grafton	Assistant State superintendent	Do.
W. S. Fleming	.....do	Do.
Julius F. McDonald	Supervisor of public high schools	Do.
J. D. Blackwell	Director of vocational agriculture	Do.
E. L. White	Division of rural schools	Do.
L. T. Cunningham	Rural-school supervisor	Do.
L. Z. Timmons	.....do	Do.
N. J. Clancy	Statistician	Do.
Grover Lewis	Auditor	Do.
C. A. Murray	Certificate clerk	Do.
C. A. Jay	Chairman State board of examiners	Do.
W. S. Brandenberger	Secretary State board of examiners	Do.
Walker King	College examiner of State board of examiners	Do.
L. E. Dudley	Supervisor of public high schools	Do.
G. A. Porter	.....do	Do.
J. P. Burk	.....do	Do.
Emma L. Brown	.....do	Do.
Rebecca Switzer	.....do	Do.
Utah:		
E. G. Gowans	State superintendent of public instruction	Salt Lake City.
E. J. Norton	Deputy superintendent	Do.
Mosiah Hall	State high-school inspector	Do.
Francis W. Kirkham	Director of vocational education	Do.
I. B. Ball	State supervisor in agriculture	Do.
Jean Cox	State supervisor in home economics	Do.
Vermont:		
M. B. Hillegas	Commissioner of education	Montpelier.
Clyde M. Hill	State supervisor of junior high schools	Do.
Virginia:		
Harris Hart	State superintendent of public instruction	Richmond.
W. T. Hodges	Supervisor of rural schools	Do.
E. E. Worrell	.....do	Do.
Arthur D. Wright	Supervisor of colored schools	Do.
Thomas D. Eason	Supervisor of agricultural schools	Do.
S. P. Duke	Supervisor of high schools	Do.
J. N. Hillman	Supervisor of teacher training	Do.
J. H. Montgomery	Executive secretary Cooperative Education Association.	Do.

IX.—PRINCIPAL STATE SCHOOL OFFICERS—Continued.

States and officers.	Official designation.	Address.
Washington:		
Mrs. Josephine C. Preston	State superintendent of public instruction	Olympia.
Arthur Wilson	Assistant superintendent	Do.
Addie E. Dickinson	Deputy superintendent	Do.
Edwin Twitmyer	High-school inspector	Seattle.
Blanche A. Nagel	Rural assistant	Olympia.
Rose R. Fowler	Secretary State board of examiners	Do.
West Virginia:		
M. P. Shawkey	State superintendent of free schools	Charleston.
E. E. Knight	Assistant State superintendent	Do.
L. L. Friend	Supervisor of high schools	Do.
L. J. Hanifan	Supervisor of rural schools	Do.
Geo. E. Hubbs	Supervisor of examinations	Do.
J. F. Marsh	Secretary of State board of regents	Do.
Wisconsin:		
C. P. Cary	State superintendent of public schools	Madison.
Carter Alexander	Assistant State superintendent	Do.
C. L. Harper	Second assistant State superintendent	Do
O. S. Rice	Supervisor of school libraries	Do.
W. W. Theisen	Supervisor of educational measurements	Do.
Cecil W. Fleming	Assistant supervisor of educational measurements.	Do.
H. L. Terry	High-school supervisor	Do.
H. N. Goddard	....do	Do.
T. W. Gosling	....do	Do.
A. B. Cook	Supervisor of day schools for the deaf and blind	Do.
J. M. Dorrans	Manual-training supervisor	Do.
Geo. H. Drewry	State school supervisor	Do.
S. Miles Thomas	....do	Do.
W. T. Anderson	....do	Do.
A. A. Thomson	Supervisor of rural schools	Do.
Walter E. Larson	....do	Do.
Annie Reynolds	Supervisor of grades	Do.
Maybelle Bush	....do	Do.
Amy Bronsky	....do	Do.
Helen Goodspeed	Supervisor of domestic science	Do.
Elizabeth L. Woods	Supervisor of exceptional classes	Do.
Wyoming:		
Edith K. O. Clark	State superintendent of public instruction	Cheyenne.
Thomas B. McDonough	Deputy superintendent of public instruction	Do.
J. O. Creager	Commissioner of education	Do.
Jennie G. McGuffey	Chief of the bureau of certification	Do.

X.—EXECUTIVE OFFICERS OF STATE BOARDS OF EDUCATION.[1]

Officers of the board.	Post-office address.	Other official title.
Thomas Riggs, jr., president	Juneau, Alaska	Governor.
George W. P. Hunt, chairman	Phoenix, Ariz	Do.
C. O. Case, secretary	....do	State superintendent of public instruction.
J. L. Bond, chairman	Little Rock, Ark	Do.
B. W. Torreyson, secretary	Conway, Ark	
Edward Hyatt, secretary	Sacramento, Cal	Superintendent of public instruction.
Mary C. C. Bradford, president	Denver, Colo	Do.
Alice B. Clark, secretary	....do	Deputy State superintendent.
Marcus H. Holcomb, president	Southington, Conn	Governor.
Charles D. Hine, secretary	Hartford, Conn	
Clifford J. Scott, president	Wilmington, Del	
A. R. Spaid, secretary	Dover, Del	State commissioner of education.
Mrs. Margarita Spaulding Gerry, acting president.	Washington, D. C	
H. O. Hine, secretary	....do	
Sidney J. Catts, president	Tallahassee, Fla	Governor.
W. N. Sheats, secretary	....do	State superintendent of public instruction.
Hugh M. Dorsey, president	Atlanta, Ga	Governor.
M. L. Brittain, secretary and executive.	....do	State superintendent of schools.
Evan Evans, president	Grangeville, Idaho	
J. A. Keefer, secretary	Shoshone, Idaho	
Horoce Ellis, president (L. N. Hines, after March 15.)	Indianapolis, Ind	Do.
W. W. Parsons, secretary	Terre Haute, Ind	
D. D. Murphy, president	Elkader, Iowa	
W. H. Gemmill, secretary	Des Moines, Iowa	
Lizzie Wooster. president	Topeka, Kans	Do.
L. D. Whittemore, secretary	....do	

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[1] Forty-one States have State boards of education, as here indicated, including **New York State Board of Regents.**

X.—EXECUTIVE OFFICERS OF THE STATE BOARDS OF EDUCATION—Continued.

Officers of the board.	Post-office address.	Other official title.
V. O. Gilbert, chairman	Frankfort, Ky	State superintendent of public instruction.
E. L. Kidd, president	Ruston, La	
T. H. Harris, secretary	Baton Rouge, La	State superintendent of public education.
Thomas H. Lewis, president	Westminster, Md	President Western Maryland College.
M. Bates Stephens, secretary	Baltimore, Md	State superintendent of public education
Frederick P. Fish, chairman	Boston, Mass	
Payson Smith, executive officer	.....do	State commissioner of education.
Frank Cody, president	Detroit, Mich	
Fred L. Keeler, secretary	Lansing, Mich	State superintendent of public instruction.
W. F. Bond, president	Jackson, Miss	State superintendent of public education.
J. W. Power, secretary	.....do	Secretary of state.
Samuel A. Baker, president	Jefferson City, Mo	State superintendent of public schools.
John L. Sullivan, secretary	.....do	Secretary of state.
S. V. Stewart, president	Helena, Mont	Governor.
May Trumper, secretary	.....do	State superintendent of public instruction.
Emmet D. Boyle, president	Carson City, Nev	Governor.
W. J. Hunting, secretary	.....do	State superintendent of public instruction.
M. A. Rice, president	Atlantic Highlands, N. J.	
Calvin N. Kendall, secretary	Trenton, N. J	State commissioner of education.
W. E. Lindsey, president	Santa Fe, N. Mex	Governor.
J. Harold Wagner, secretary	.....do	State superintendent of public instruction.
Pliny T. Sexton, chancellor of the university.	Palmyra, N. Y	
John H. Finley, chief executive	Albany, N. Y	President of the university and State commissioner of education.
T. W. Bickett, president	Raleigh, N. C	Governor.
J. Y. Joyner, secretary	.....do	State superintendent of public instruction.
Minnie Neilson, president	Bismarck, N. Dak	Superintendent of public instruction.
K. B. Macdonald, secretary	.....do	Deputy superintendent of public instruction.
Alfred Vivian, president	Columbus, Ohio	Dean of College of Agriculture (State University).
F. B. Pearson, secretary	.....do	Superintendent of public instruction.
R. H. Wilson, chairman	Oklahoma, Okla	State superintendent of public instruction.
T. T. Montgomery, secretary	.....do	
James Withycomb, president	Salem, Oreg	Governor.
J. A. Churchill, secretary	.....do	State superintendent of public instruction.
Nathan C. Schaeffer, president	Harrisburg, Pa	Do.
J. George Becht, executive secretary	.....do	
R. L. Beeckman, president	Newport, R. I	Governor.
Walter E. Ranger, secretary	Providence, R. I	Commissioner of public schools.
Richard I. Manning, chairman	Columbia, S. C	Governor.
J. E. Swearingen, secretary	.....do	State superintendent of education.
P. L. Harned, president	Clarksville, Tenn	President of State board of industrial education.
S. W. Sherrill, ex officio secretary	Nashville, Tenn	State superintendent of public instruction.
W. P. Hobby, president	Austin, Tex	Governor.
Annie Webb Blanton, secretary	.....do	State superintendent of public instruction.
E. G. Gowans, chairman	Salt Lake City, Utah	Do.
J. A. Widtsoe, secretary	.....do	
E. J. Norton, assistant secretary	.....do	Deputy superintendent.
James Hartness, chairman	Springfield, Vt	
Rollo G. Reynolds, executive clerk	Montpelier, Vt	
Harris Hart, president	Richmond, Va	State superintendent of public instruction.
William R. Smithey, secretary	.....do	
Mrs. Josephine C. Preston, president	Olympia, Wash	Do.
Arthur Wilson, acting secretary	.....do	Assistant superintendent of public instruction.
M. P. Shawkey, president	Charleston, W. Va	State superintendent of free schools.
J. F. Marsh, secretary	.....do	
Herman Grotophorst, president	Madison, Wis	
F. S. Lamb, secretary	.....do	
S. A. Huston, chairman	Cheyenne, Wyo	
J. O. Creager, secretary	.....do	Commissioner of education.

XI.—EXECUTIVE OFFICERS OF STATE LIBRARY COMMISSIONS.[1]

Executive officer.	Post-office address.	Name of commission.
Thomas M. Owen, director	State Capitol, Montgomery, Ala.	State department of archives and history, library extension division.
George B. Rose, chairman	Little Rock, Ark	Arkansas library commission.
Milton J. Ferguson, State librarian.	Sacramento, Cal	California State library.
Chalmers Hadley, president	Public Library, Denver, Colo.	State board of library commissioners.
Carrie M. Cushing, librarian and clerk.	The Capitol, Denver, Colo	State traveling library commission.
C. D. Hine, chairman	Hartford, Conn	Connecticut public library committee.
Earle D. Willey, secretary	State Library, Dover, Del	State library commission
Susie Crumley, organizer	Carnegie Library, Atlanta, Ga.	Do.
Mrs. Marie M. Schreiber, secretary.	Statehouse, Boise, Idaho	Do.
Anna M. Price, secretary	Springfield, Ill	Illinois library extension commission.
William J. Hamilton, secretary	Statehouse, Indianapolis, Ind.	State public library commission.
Julia A. Robinson, secretary	State Historical Building, Des Moines, Iowa.	State library commission.
Mrs. Adrian Greene, secretary	State Library, Topeka, Kans.	Kansas traveling libraries commission.
Fannie C. Rawson, secretary	Capitol, Frankfort, Ky	Kentucky library commission.
Henry E. Dunnack, secretary	State Library, Augusta, Me.	Maine library commission.
Mrs. M. A. Newell, secretary	Enoch Pratt Free Library, Baltimore, Md.	Maryland public library commission.
E. Louise Jones, general secretary and library adviser.	State Library, Boston, Mass.	Massachusetts free public library commission.
Mrs. Mary C. Spencer, secretary	State Library, Lansing, Mich.	State board of library commissioners.
Clara F. Baldwin, director	The Capitol, St. Paul, Minn	State public library commission.
Elizabeth B. Wales, secretary	202 Washington St., Jefferson City, Mo.	Missouri library commission.
Charlotte Templeton, secretary	The Capitol, Lincoln, Nebr	State public library commission.
Albertus T. Dudley, secretary	Exeter, N. H	Do.
Henry C. Buchanan, secretary	Trenton, N. J	Do.
James I. Wyer, jr., director	Albany, N. Y	State library.
William R. Watson, chief of division.	do	Division of educational extension, University of the State of New York.
Mrs. Edward R. Blanton, secretary	Raleigh, N. C	North Carolina library commission.
Mrs. Minnie C. Budlong, secretary.	Bismarck, N. Dak	State public library commission.
John H. Newman, secretary	State Library, Columbus, Ohio.	State board of library commissioners.
Cornelia Marvin, librarian	Supreme court building, Salem, Oreg.	State library.
T. L. Montgomery, secretary	State Library, Harrisburg, Pa.	Pennsylvania free library commission.
Walter E. Ranger, secretary	Statehouse, Providence, R. I.	State committee on libraries, Rhode Island State education department.
Julia C. Stockett, field librarian	Statehouse, Pierre, S. Dak	State free library commission.
Elizabeth H. West, secretary	State Library, Austin, Tex	State library and historical commission.
Mary E. Downey, secretary and organizer.	Salt Lake City, Utah	State library.
Ruth L. Brown, secretary	34 Elm St., Montpelier, Vt	State free public library commission.
H. R. McIlwaine, librarian	State Library, Richmond, Va.	Virginia State library.
J. M. Hitt, secretary	State Library, Olympia, Wash.	State library commission.
Matthew S. Dudgeon, secretary	The Capitol, Madison, Wis	Wisconsin free library commission.

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[1] Thirty-six States have library commissions as here indicated.

XII.—COUNTY AND OTHER LOCAL SUPERINTENDENTS OF SCHOOLS.

County.	County superintendent.	County.	County superintendent.
ALABAMA.		ALABAMA—contd.	
Autauga	Mrs. R. L. Faucett, Prattville.	Houston	J. M. Odom, Dothan.
Baldwin	J. S. Lambert, Bay Minette.	Jackson	Jesse Wheeler, Scottsboro.
Barbour	J. M. Laird, Clio.	Jefferson	N. R. Baker, Birmingham.
Bibb	R. C. Thomas, Centerville.	Lamar	G. S. Smith, Vernon.
Blount	A. L. Head, Cleveland.	Lauderdale	D. O. Warren, Florence.
Bullock	F. B. Haynes, Union Springs.	Lawrence	C. C. Kerby, Moulton.
Butler	P. B. Pepper, Georgiana.	Lee	W. Y. Fleming, Phoenix.
Calhoun	H. T. Persons, Anniston.	Limestone	M. K. Clements, Athens.
Chambers	G. M. Barnett, Lafayette.	Lowndes	J. A. Coleman, Hayneville.
Cherokee	John W. Browder, Galesville.	Macon	W. B. Riley, Tuskegee.
Chilton	Willie T. Bean, Clanton.	Madison	S. R. Butler, Huntsville.
Choctaw	Zac Rogers, Butler.	Marengo	Geo. M. Watson, Linden.
Clarke	J. F. Gillis, Grove Hill.	Marion	J. H. Couch, Guin.
Clay	W. T. Harwell, Ashland.	Marshall	E. O. Creel, Boaz.
Cleburne	G. B. Boman, Heflin.	Mobile	S. S. Murphy, Mobile.
Coffee	G. C. Bowden, Elba.	Monroe	Geo. A. Harris, Monroeville.
Colbert	Joe Walker, Tuscumbia.	Montgomery	W. F. Feagin, Montgomery.
Conecuh	W. R. Bennett, Red Level.	Morgan	J. C. Tidwell, Albany.
Coosa	H. H. King, Kellyton.	Perry	Chas. C. Johnson, Marion.
Covington	Chas. Baker, Andalusia.	Pickens	W. H. Storey, Carrollton.
Crenshaw	T. A. Capps, Luverne.	Pike	Mrs. J. M. Sanders, Troy.
Cullman	Geo. C. Metz, Cullman.	Randolph	J. N. Word, Wedowee.
Dale	R. L. Marchman, Pinckard.	Russell	H. E. Hutchinson, Hurtsboro.
Dallas	D. M. Callaway, Selma.	Shelby	S. P. Williamson, Sterrett, R. F. D. No. 1.
Dekalb	J. M. Tucker, Boaz.		
Elmore	G. H. Howard, Wetumpka.	St. Clair	Geo. W. Floyd, Ashville.
Escambia	R. E. Ledbetter, Brewton.	Sumter	R. B. Callaway, Cuba.
Etowah	E. P. Murphy, Gadsden.	Talladega	M. T. Linder, Talladega.
Fayette	R. L. Reaves, Fayette.	Tallapoosa	J. D. Lane, Dadeville.
Franklin	John R. Guin, Belgreen.	Tuscaloosa	D. L. Smith, Tuscaloosa.
Geneva	B. H. Boyd, Hartford.	Walker	T. J. York, Jasper.
Greene	W. P. Archibald, Knoxville.	Washington	C. C. Smith, Chatom.
Hale	W. C. Willburn, Evergreen.	Wilcox	O. C. Weaver, Camden.
Henry	P. A. McDaniel, Abbeville.	Wintons	A. B. Curtis, Double Springs.

District.	District superintendents of schools for natives.	District.	District superintendents of schools for natives.
ALASKA.		ALASKA—contd.	
Northwestern dist.	Walter C. Shields, Nome.	Upper Yukon dist.	Frederick L. Forbes, Tanana.
Western dist.	Walter H. Johnson, St. Michael.	Southwestern dist.	Arthur H. Miller, Anchorage.
Do.	John H. Kilbuck (assistant), Akiak.	Southeastern dist.	C. W. Hawkesworth, Juneau.

County.	County superintendent.	County.	County superintendent.
ARIZONA.		ARKANSAS—contd.	
Apache	J. W. Brown, St. Johns.	Bradley	E. W. McGough, Warren.[1]
Cochise	Elsie Tales, Tombstone.	Calhoun	G. J. James, Hampton.[1]
Coconino	Lenore Frances, Flagstaff.	Carroll:	
Gila	Mabry Crozier, Globe.	Eastern dist.	C. E. Bennett, Berryville.[1]
Graham	S. C. Heywood, Safford.	Western dist.	M. L. McCall, Eureka Springs.[1]
Greenlee	Jessie Billingsley, Clifton.	Chicot	D. T. Henderson, Eudora.
Maricopa	A. H. Fulton, Phoenix.	Clark	H. A. Woodward, Arkadelphia.[1]
Mohave	Mrs. L. J. Lassell, Kingman.	Clay:	
Navajo	Joseph Peterson, Holbrook.	Eastern dist.	W. O. Irby, Piggott.[1]
Pima	Vera Z. Shurtz, Tucson.	Western dist.	Archie Taylor, Corning.[1]
Pinal	Lola Le Baron, Florence.	Cleburne	Fred Moore, Heber Springs.
Santa Cruz	Mrs. Josephine Saxon, Nogales.	Cleveland	T. H. Berry, Rison.[1]
Yavapai	W. Curtis Miller, Prescott.	Columbia	V. M. Hardin, McNeil.[1]
Yuma	Nora E. Marrow, Yuma.	Conway	W. A. Tucker, Plummerville.[1]
		Craighead	Oscar Findley, Jonesboro.[1]
ARKANSAS.		Crawford	H. W. Shaffer, Van Buren.
		Crittenden	T. P. Johnson, Earle.
Arkansas	J. M. Henderson, jr., DeWitt.	Cross	S. R. Curtis, Wynne.[1]
Ashley	Guy E. Smith, Hamburg.[1]	Dallas	U. C. Barnett, Fordyce.[1]
Baxter	H. A. Goatcher, Mountain Home.[1]	Desha	L. M. Gary, Dumas.[1]
Benton	W. R. Edwards, Bentonville.	Drew	V. R. Morgan, Wilmar.[1]
Boone	J. O. Curnutt, Bellefonte.[1]	Faulkner	A. A. Parsons, jr., Mount Vernon.[1]

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[1] County examiner.

XII.—COUNTY AND OTHER LOCAL SUPERINTENDENTS OF SCHOOLS—Continued.

County.	County superintendent.
ARKANSAS—contd.	
Franklin:	
Charleston dist.	G. L. Amos, Charleston.[1]
Ozark dist.	W. I. Agee, Ozark.[1]
Fulton	H. E. Watson, Viola.[1]
Garland	O. L. Henderson, Hot Springs.
Grant	T. Nathan Nall, Sheridan.[1]
Greene	J. A. Walden, Paragould, R. F. D. No. 2.[1]
Hempstead	J. J. Roberts, Hope, R. F. D. No. 2.[1]
Hot Spring	J. L. Pratt, Malvern.[1]
Howard	A. L. Merrell, Nashville.[1]
Independence	Sidney Pickens, Batesville.[1]
Izard	W. E. Schultz, Calico Rock.[1]
Jackson	E. H. Bowman, Newport.
Jefferson	A. W. Lowe, Pine Bluff.
Johnson	J. W. Sallis, Clarksville.
Lafayette	J. F. Bright, Lewisville.[1]
Lawrence	R. C. Waldron, Black Rock.[1]
Lee	L. N. Whitenton, Marianna.
Lincoln	F. E. Grumbles, Star City.[1]
Little River	D. P. Holmes, Ashdown.[1]
Logan:	
Southern dist.	G. A. Scott, Booneville.[1]
Northern dist.	W. H. Houser, Ratcliff.[1]
Lonoke	W. C. Davis, Lonoke.
Madison	Troy Clark, Huntsville.[1]
Marion	W. H. Bryant, Yellville.[1]
Miller	T. V. Reid, Texarkana.
Mississippi	J. T. Miller, Blytheville.
Monroe	W. H. Laney, Clarendon.
Montgomery	W. G. Miller, Mount Ida.
Nevada	C. M. Hirst, Prescott.[1]
Newton	H. E. Martin, Jasper.
Ouachita	C. D. Umstead, Stephens.[1]
Perry	W. B. Loudermilk, Adona.[1]
Phillips	E. M. Pipkin, jr., Helena.[1]
Pike	T. A. Floyd, Daisy.[1]
Poinsett	H. B. Thorn, Harrisburg.
Polk	W. H. Pigg, Mena.[1]
Pope	H. A. Rushing, Atkins.[1]
Prairie	J. C. Griffin, Hickory Plains.
Pulaski	R. H. Parham, Little Rock.[1]
Randolph	R. A. Mock, Warm Springs.[1]
Saline	W. H. Morden, Alexandria.[1]
Scott	G. C. Ellis, Waldron.[1]
Searcy	N. M. Sutterfield, Marshall.[1]
Sebastian	L. M. Redwine, Greenwood.
Sevier	J. G. Moore, De Queen.[1]
Sharp:	
Northern dist.	M. A. Kellet, Williford.[1]
Southern dist.	J. W. Taylor, Cave City.[1]
St. Francis	J. M. Wilson, Forrest City.[1]
Stone	E. R. Hinkle, Marcella.[1]
Union	Perry Nelson, Wesson.[1]
Van Buren	O. M. Jennings, Choctaw.[1]
Washington	W. F. Buck, Fayetteville.
White	J. W. Henry, Searcy.
Woodruff:	
Northern dist.	W. N. Wilkes, McCrory.[1]
Southern dist.	C. C. Hunnicutt, Cotton Plant.[1]
Yell:	
Danville dist.	N. M. Campbell, Gravelly.[1]
Dardanelle dist.	T. A. Wright, Centerville.[1]
CALIFORNIA.	
Alameda	Geo. W. Frick, Oakland.
Alpine	Mrs. Eugenia M. Bruns, Sheridan, Nev.
Amador	Mrs. Sabra Greenhalgh, Jackson.
Butte	Mrs. Pearle Rutherford, Oroville.
Calaveras	Teresa Rivara, San Andreas.
Colusa	Perle Sanderson, Colusa.
Contra Costa	Wm. H. Hanlon, Martinez.
Del Norte	Jos. M. Hamilton, Crescent City.
CALIFORNIA—con.	
Eldorado	S. B. Wilson, Placerville.
Fresno	E. W. Lindsay, Fresno.
Glenn	S. M. Chaney, Willows.
Humboldt	Geo. Underwood, Eureka.
Imperial	A. P. Shibley, El Centro.
Inyo	Mrs. M. A. Clarke, Bishop.
Kern	L. E. Chenoweth, Bakersfield.
Kings	J. E. Meadows, Hanford.
Lake	Minerva Ferguson, Lakeport.
Lassen	Julia Norwood, Susanville.
Los Angeles	Mark Keppel, Los Angeles.
Madera	Craig Cunningham, Madera.
Marin	Jas. B. Davidson, San Rafael.
Mariposa	John L. Dexter, Mariposa.
Mendocino	Mrs. Anna Porterfield, Ukiah.
Merced	Margaret Sheehy, Merced.
Modoc	Mrs. Nettie B. Harris, Alturas.
Mono	Mrs. A. M. Hays, Bridgeport.
Monterey	Geo. Schultzberg, Salinas.
Napa	Lena A. Jackson, Napa.
Nevada	R. J. Fitzgerald, Nevada City.
Orange	R. P. Mitchell, Santa Ana.
Placer	Irene Burns, Auburn.
Plumas	Mrs. Kate L. Donnelley, Quincy.
Riverside	Raymond Cree, Riverside.
Sacramento	Carolyne M. Webb, Sacramento.
San Benito	W. J. Cagney, Hollister.
San Bernardino	Mrs. Grace C. Stanley, San Bernardino.
San Diego	John F. West, San Diego.
San Francisco	Alfred Roncovieri, San Francisco.
San Joaquin	John W. Anderson, Stockton.
San Luis Obispo	W. S. Wight, San Luis Obispo.
San Mateo	Roy W. Cloud, Redwood City.
Santa Barbara	Mamie V. Lehner, Santa Barbara.
Santa Clara	Agnes E. Howe, San Jose.
Santa Cruz	Champ S. Price, Santa Cruz.
Shasta	Mrs. Charlotte Cunningham, Redding.
Sierra	Belle Alexander, Downieville.
Siskiyou	W. H. Parker, Yreka.
Solano	Dan H. White, Fairfield.
Sonoma	Florence Barnes Schieffer, Santa Rosa.
Stanislaus	Frank Bacon, Modesto.
Sutter	Lizzie Vagedes, Yuba City.
Tehama	Mamie B. Lang, Red Bluff.
Trinity	Maude I. Schroter, Weaverville.
Tulare	J. E. Buckman, Visalia.
Tuolumne	G. P. Morgan, Sonora.
Ventura	Jas. E. Reynolds, Ventura.
Yolo	Harriett S. Lee, Woodland.
Yuba	Jennie Malaley, Marysville.
COLORADO.	
Alamosa	Ada Sundquist, Alamosa.
Adams	Helen Lamb, Brighton.
Arapahoe	Mrs. Sada R. Wilson, Littleton.
Archuleta	Mrs. Alice Noland, Pagosa Springs.
Baca	Earl C. Denney, Springfield.
Bent	Allie V. Richmond, Las Animas.
Boulder	E. D. Webb, Boulder.
Chaffee	Mrs. Rosa W. Ridgway, Buena Vista.
Cheyenne	Mrs. Esther B. Weir, Cheyenne Wells.
Clear Creek	Mrs. Elizabeth Gleason, Idaho Springs.
Conejos	L. H. Mortensen, Sanford.

[1] County examiner.

XII.—COUNTY AND OTHER LOCAL SUPERINTENDENTS OF SCHOOLS—Continued.

County.	County superintendent.
COLORADO—contd.	
Costilla	Mrs. Katherine Wood, Blanca.
Crowley	Walter Dalby, Ordway.
Custer	Lloyd Wright, Westcliffe.
Delta	Mrs. Adah Price, Delta.
Denver	Mrs. Emma G. Seldon, Denver.
Dolores	Mrs. Bessie Custiss, Rico.
Douglas	Mrs. Maude Hoskins, Castle Rock.
Eagle	Ollie Graham, Redcliff.
Elbert	Minerva McCarty, Kiowa.
El Paso	Mrs. Inez Johnson Lewis, Colorado Springs.
Fremont	Anna S. Garwood, Canon City.
Garfield	Mrs. Tippett Westerman, Glenwood Springs.
Gilpin	Mrs. Edith Williams, Central City.
Grand	Mrs. Carrie D. Schnoor, Hot Sulphur Springs.
Gunnison	Verna Waterman, Gunnison.
Hinsdale	Alice Madison, Lake City.
Huerfano	Mrs. Martha Thorne, Walsenburg.
Jackson	Mrs. Minnie Bock, Walden.
Jefferson	Berness Bunger, Golden.
Kiowa	James R. Walker, Chivington.
Kit Carson	Jessie Magee Gray, Burlington.
Lake	Mrs. Martha B. Johnson, Leadville.
La Plata	Nell McCartey, Durango.
Larimer	Emma T. Wilkins, Fort Collins.
COLORADO—contd.	
Las Animas	Elmore Floyd, Trinidad.
Lincoln	Miss Lennie Beavers, Hugo.
Logan	Flora A. Allison, Sterling.
Mesa	Mrs. Elizabeth Hinton, Grand Junction.
Mineral	Mrs. Mary N. Oates, North Creede.
Moffat	George W. Norvell, Craig.
Montezuma	Artie M. Lewis, Cortez.
Montrose	Emma Full, Montrose.
Morgan	Mrs. C. P. Cochran, Fort Morgan.
Otero	S. S. Phillips, La Junta.
Ouray	Alma Brockway, Ouray.
Park	Miss Marian Hill, Fairplay.
Phillips	Chas. R. Peters, Holyoke.
Pitkin	Ethel Higinbotham, Aspen.
Prowers	Mary Z. Lake, Lamar.
Pueblo	Mrs. Lillie O. Baker, Pueblo.
Rio Blanco	R. B. Garrison, Meeker.
Rio Grande	Carrie Deitrich, Monte Vista.
Routt	Mrs. Emma H. Peck, Hayden.
Saguache	S. E. Forbes, Saguache.
San Juan	Mrs. Mary B. Hodges, Silverton.
San Miguel	Bertha T. Cameron, Telluride.
Sedgwick	Emma Carlson, Julesburg.
Summit	Mrs. Melissa Hayden, Breckenridge.
Teller	Mrs. Nellie Slusher, Cripple Creek.
Washington	Mrs. Rose Bachman, Akron.
Weld	A. B. Copeland, Greeley.
Yuma	Clara Tegner, Wray.

Towns in union.	Union superintendent.[1]
CONNECTICUT.[2]	
Ashford, Canterbury, Eastford, Union.	William H. Bliss, Chestnut Hill.
Avon, Burlington, Farmington.	Lewis S. Mills, 58 East Main Street, Plainville.
Barkhamsted, Colebrook, Hartland, New Hartford, Morris.	A. D. Simpson, 78 South Main Street, Winsted.
Beacon Falls, Bethany, Middlebury, Oxford, Prospect, Wolcott.	Wm. H. Holmes, Seymour, R. F. D. No. 1.
Berlin, Westbrook	Joseph W. Dows, 331 Temple Street, New Haven.
Bethlehem	L. K. Chance, Watertown.
Bloomfield, Canton, Granby.	W. H. Mandrey, Warehouse Point.
Bolton, Ellington, Somers.	Charles L. Warner, 1 Pine Street, Rockville.
Bozrah, Franklin, Lisbon, Sprague.	Fred W. Shearer, 118 River Avenue, Norwich.
Bridgewater, Kent, Roxbury, Sherman, Washington.	J. L. Meader, New Milford, Box 98.
Brookfield, New Fairfield, Redding, Southbury, Wilton.	F. A. Morris, 27 Crane Street, Danbury.
Canaan, North Canaan, Salisbury.	Harold E. Chittenden, Canaan.
Cheshire, Middlefield, North Haven, Old Lyme.	Dewitt C. Allen, Montowese.
Chester	Robert E. Foote, Chester.
Columbia, Mansfield, Pomfret.	Frank W. Clapp, 175 Summit Street, Willimantic.
Cornwall, Goshen, Sharon, Warren.	C. H. Westbrook, West Cornwall.
CONNECTICUT—contd.	
Coventry, Lebanon, Tolland.	A. B. Lord, Box 252, Willimantic.
Cromwell, Durham, East Hampton, Lyme.	James F. Connolly, 56 High Street, Farm Hill, Middletown.
East Granby	Wilson S. Dakin, 31 Norfolk Street, Hartford.
East Lyme, Montville, Waterford.	Carlon E. Wheeler, 81 Lincoln Avenue, New London.
Easton, Monroe, Trumbull, Weston.	D. Albert Green, 15 Maple Street, Norwalk.
Haddam, Killingworth, Portland.	A. C. Johnson, Box 613, Portland.
Hampton, Scotland	N. Searle Light, 138 Edgewood Street, Hartford.
Harwinton, North Branford, Woodbury.	A. F. Mayhew, 131 Prince Street, Wallingford.
Hebron, Marlboro, Salem.	H. S. Libby, Colchester
Ledyard, North Stonington, Preston, Voluntown.	Otis Earle Lowell, 156 Laurel Hill Avenue, Norwich.
Madison	Arthur L. Young, 105 Rogers Street, Branford.
Rocky Hill, Suffield	Harold B. Chapman, Box 7, Suffield.
Saybrook, Wethersfield.	H. O. Clough, West Hartford.
Sterling	E. Ward Ireland, Y. M. C. A., Hartford.
Willington	Levi T. Garrison, 17 Godfrey Street, Willimantic.
Woodstock	F. E. Harrington, 61 Grove Street, Putnam.

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[1] The supervising officers are agents of the State Board of Education.

[2] See also p. 74.

XII.—COUNTY AND OTHER LOCAL SUPERINTENDENTS OF SCHOOLS—Continued.

County.	County superintendent.
DELAWARE.	
Kent	John Shilling, Dover.
New Castle	Wilbur H. Jump, Wilmington.
Sussex	Ernest J. Hardesty, Seaford.
FLORIDA.	
Alachua	E. R. Simmons, Gainesville.
Baker	J. D. Dugger, Macclenny.
Bay	A. M. Douglas, Panama City.
Bradford	E. R. Poppell, Starke.
Brevard	S. J. Overstreet, Titusville.
Broward	J. M. Holding, Fort Lauderdale.
Calhoun	J. Flake Durham, Blountstown.
Citrus	H. J. Dame, Inverness.
Clay	G. J. North, Green Cove Springs.
Columbia	James R. Lites, Lake City.
Dade	R. E. Hall, Miami.
De Soto	P. G. Shaver, Arcadia.
Duval	F. A. Hathaway, Jacksonville.
Escambia	A. S. Edwards, Pensacola.
Flagler	B. F. Buchanan, Bunnell.
Franklin	A. A. Core, Apalachicola.
Gadsden	C. H. Gray, Quincy.
Hamilton	J. A. Jackson, Jasper.
Hernando	W. O. Lemasters, Brooksville.
Hillsboro	J. E. Knight, Tampa.
Holmes	M. R. Robison, Bonifay.
Jackson	M. O. King, Marianna.
Jefferson	S. H. Taylor, Monticello.
Lafayette	J. Homer Kelly, Mayo.
Lake	W. T. Kennedy, Umatilla.
Lee	J. W. Sherrill, Fort Myers.
Leon	F. S. Hartsfield, Tallahassee.
Levy	W. F. Osteen, Bronson.
Liberty	R. E. Turner, Hosford.
Madison	G. W. Tedder, Madison.
Manatee	B. D. Gullett, Bradentown.
Marion	J. H. Brinson, Ocala.
Monroe	Virgil S. Lowe, Key West.
Nassau	L. L. Owens, Fernandina.
Okaloosa	Will C. Pryor, Crestview.
Okeechobee	R. E. Hamrick, Okeechobee.
Orange	A. B. Johnson, Orlando.
Osceola	C. E. Yowell, Kissimmee.
Palm Beach	J. B. McDonald, West Palm Beach.
Pasco	J. W. Sanders, Dade City.
Pinellas	Dixie M. Hollins, Clearwater.
Polk	John A. Moore, Bartow.
Putnam	C. H. Price, Palatka.
St. Johns	D. D. Corbett, St. Augustine.
St. Lucie	J. W. Hodge, Fort Pierce.
Santa Rosa	J. D. Smith, jr., Milton.
Seminole	T. W. Lawton, Sanford.
Sumter	G. H. Tompkins, Wildwood.
Suwanee	J. W. O'Hara, Live Oak.
Taylor	Festus S. Jackson, Perry.
Volusia	C. R. M. Sheppard, De Land.
Wakulla	C. K. Allen, Sopchoppy.
Walton	J. J. Kennedy, De Funiak Springs.
Washington	J. H. Varnum, Vernon.
GEORGIA.	
Appling	B. D. Deen, Baxley.
Bacon	Geo. A. Taylor, Alma.
Baker	J. H. Hall, Newton.
Baldwin	Edward Tigner, Milledgeville.
Banks	J. T. Wise, Baldwin.
Barrow	W. M. Holsenbeck, Winder.
Bartow	J. W. Jackson, Cartersville.
Ben Hill	J. H. Bullard, Fitzgerald.
Berrien	S. J. Baker, Nashville.
Bibb	C. H. Bruce, Macon.
GEORGIA—contd.	
Bleckley	H. E. Harville, Cochran.
Brooks	John F. McCall, Quitman.
Byran	Edward Benton, Pembroke.
Bulloch	B. R. Olliff, Statesboro.
Burke	H. C. Daniel, Waynesboro.
Butts	Hugh Mallet, Jackson.
Calhoun	H. T. Singleton, Edison.
Camden	T. E. Casey, St. Marys.
Campbell	W. H. McLarin, Fairburn.
Candler	M. H. Williams, Metter.
Carroll	V. D. Whatley, Carrolton.
Catoosa	S. J. Bowman, Ringgold.
Charlton	T. E. Brock, Folkston.
Chatham	C. B. Gibson, Savannah.
Chattahoochee	C. N. Howard, Cusseta.
Chattooga	S. E. Jones, Summerville.
Cherokee	T. A. Doss, Canton.
Clarke	T. H. Dozier, Athens.
Clay	E. R. King, Fort Gaines.
Clayton	W. L. Gilbert, Jonesboro.
Clinch	J. O. Rodgers, Homerville.
Cobb	Bernard Awtrey, Marietta.
Coffee	J. Gordon Floyd, Douglas.
Colquitt	Lee S. Dismuke, Moultrie.
Columbia	J. L. Weeks, Appling.
Coweta	J. M. Starr, Newnan.
Crawford	J. F. Dickey, Musella.
Crisp	J. W. Bivins, Cordele.
Dade	S. J. Hale, Trenton.
Dawson	A. W. Vandiviere, Dawsonville.
Decatur	J. B. L. Barber, Bainbridge.
Dekalb	R. E. Carroll, Decatur.
Dodge	M. W. Harrell, Eastman.
Dooly	J. M. Royal, Vienna.
Dougherty	S. R. De Jarnette, Albany.
Douglas	G. T. McLarty, Douglasville.
Early	E. A. Evans, Blakely.
Echols	R. W. Touchton, Statenville.
Effingham	A. E. Bird, Guyton.
Elbert	T. J. Cleveland, Elberton.
Emanuel	Robert E. Rountree, Swainsboro.
Evans	R. M. Girardeau, Claxton.
Fannin	F. L. Cochran, Epworth.
Fayette	E. E. Thornton, Fayetteville.
Floyd	W. C. Rash, Rome.
Forsyth	A. C. Kennemore, Cumming.
Franklin	E. McDuffie, Carnesville.
Fulton	J. W. Simmons, Atlanta.
Gilmer	J. S. Hudson, Ellijay.
Glascock	J. P. Allen, Mitchell.
Glynn	N. H. Ballard, Brunswick.
Gordon	Ernest Dillard, Calhoun.
Grady	J. S. Weathers, Cairo.
Greene	W. A. Purks, White Plains.
Gwinnett	C. R. Ware, Lawrenceville.
Habersham	Arthur Sisk, Clarkesville.
Hall	J. D. Underwood, Gainesville.
Hancock	C. W. Moran, Sparta.
Haralson	John W. White, Buchanan.
Harris	Tom Wisdom, Chipley.
Hart	W. B. Morris, Hartwell.
Heard	W. E. Denney, Franklin.
Henry	T. J. Horton, McDonough.
Houston	F. M. Greene, Perry.
Irwin	J. W. Weaver, Ocilla.
Jackson	L. F. Elrod, Jefferson.
Jasper	J. M. Elizer, Monticello.
Jeff Davis	J. A. Walker, Hazelhurst.
Jefferson	H. E. Smith, Bartow.
Jenkins	W. V. Lanier, Millen.
Johnson	A. J. M. Robinson, Wrightsville.
Jones	E. W. Sammons, Gray.
Laurens	J. T. Smith, Dublin.
Lee	S. J. Powell, Leesburg.
Liberty	J. E. Groover, Hinesville.
Lincoln	T. L. Perryman, Lincolnton.
Lowndes	M. L. Strong, Valdosta.

OUNTY AND OTHER LOCAL SUPERINTENDENTS OF SCHOOLS—Continued.

y.	County superintendent.
-contd.	
	H. F. Higgins, Dahlonega.
	M. W. Dunn, Thomson.
	W. A. Branson, Darien.
	J. P. Nelson, Oglethorpe.
	C. B. Ayres, Danielsville.
	W. E. Drane, Buena Vista.
	W. S. Howell, Greenville.
	W. L. Stapleton, Colquitt.
	Wm. Rhodes, Alpharetta.
	G. E. West, Camilla.
	R. L. Williams, jr., Forsyth.
y	T. B. Conner, Mount Vernon.
	W. C. Thompson, Madison.
	W. D. Gregory, Crandall.
	J. L. Bond, Columbus.
	G. C. Adams, Covington.
	J. M. McRee, Watkinsville.
	M. S. Weaver, Lexington.
	C. A. Roberts, Dallas.
	G. F. Compton, Jasper.
	R. D. Thomas, Blackshear.
	F. L. Adams, Zebulon.
	John W. Sutton, Cedartown.
	A. W. Fountain, Hawkinsville.
	W. C. Wright, Eatonton.
	H. M. Kaigler, Georgetown.
	L. M. Chastain, Tiger.
	Walter McMichael, Cuthbert.
	Lawton B. Evans, Augusta.
	G. W. Crumbley, Conyers.
	J. T. Stewart, Ellaville.
	H. J. Arnett, Sylvania.
	W. H. Bolton, jr., Griffin.
	J. I. Allman, Toccoa.
	W. T. Halliday, Lumpkin.
	E. J. McMath, Americus.
	H. P. Hewitt, Talbotton.
	W. R. Moore, Sharon.
	I. S. Smith, Reidsville.
	A. S. Wallace, Butler.
	B. J. Reid, McRae.
	J. C. Dukes, Dawson.
	C. H. Rice, Thomasville.
	A. J. Ammons, Tifton.
	G. C. Brantley, Lyons.
	R. T. Coleman, Hiawassee.
	J. B. Strong, Lagrange.
	D. A. Stewart, Ashburn.
	A. M. Gates, Jeffersonville.
	T. L. Patterson, Blairsville.
	J. A. Thurston, Thomaston.
	R. D. Love, La Fayette.
	J. W. Clegg, Monroe.
	Charles Pittman, Waycross.
	R. V. Swain, Warrenton.
n	David Harrison, Sandersville.
	B. D. Purcell, Jesup.
	J. F. Colbert, Preston.
	W. G. Hartley, Alamo.
	T. V. Cantrell, jr., Cleveland.
	Jas. J. Copeland, Dalton.
	J. S. Cook, Pineview.
	C. H. Calhoun, Washington.
	Victor Davidson, Irwinton.
	Boyd L. Jones, Sylvester.
o.	
	Lulu E. Vance, Boise.
	Mrs. Maude Gregg, Council.
	Bertha L. Atkin, Pocatello.
	Seymour Spencer, Paris.
	Leila Clifford, St. Maries.
	Mrs. Grace Faulconer, Blackfoot.
	Frances Mills, Hailey.
	Clara Ellis, Idaho City.
	Mrs. Jessie H. Tuck, Sandpoint.
	Ella M. Miller, Idaho Falls.

County	County superintendent.
IDAHO—continued.	
Boundary	Caroline W. Flood, Bonners Ferry.
Butte	Mrs. Louisa Pratt, Arco.
Camas	Pearle H. Lamson, Fairfield.
Canyon	Margaret Knowlton, Caldwell.
Cassia	Mae Lowe, Albion.
Clearwater	Hulda Anderson, Orofino.
Custer	Jennie E. Kelleher, Challis.
Elmore	Blanche Skipper, Mountain Home.
Franklin	John Johnson, Preston.
Fremont	Frances Hargis, St. Anthony.
Gem	Ella C. Breshears, Emmett.
Gooding	Myrtle Journey, Gooding.
Idaho	Margaret Sweet, Grangeville.
Jefferson	Katherine Burggraf, Rigby.
Kootenai	R. C. Egbers, Coeur d'Alene.
Latah	Winifred Knepper, Moscow.
Lemhi	Anna C. Barron, Salmon.
Lewis	Retta F. Martin, Nez Perce.
Lincoln	Stella Cook, Shoshone.
Madison	George W. Worthen, Rexburg.
Minidoka	Mrs. Ida E. Sullivan, Rupert.
Nez Perce	Mrs. Minnie H. Faust, Lewiston.
Oneida	James C. Tovey, Malad.
Owyhee	Margaret Duval, Silver City.
Payette	Fae Hinkley, Payette.
Power	Mrs. Harriett M. Wilson, American Falls.
Shoshone	Florence Coughlin, Wallace.
Teton	Cecil W. Price, Driggs.
Twin Falls	Miss Brittomart Wolfe, Twin Falls.
Valley	Mrs. Tirza J. Wayland, Cascade.
Washington	Olive M. Petrashek, Weiser.
ILLINOIS.	
Adams	John H. Steiner, Quincy.
Alexander	Laura I. Milford, Cairo.
Bond	J. W. Anthony, Greenville.
Boone	Elizabeth B. Harvey, Belvidere.
Brown	C. W. Sellars, Mount Sterling.
Bureau	G. O. Smith, Princeton.
Calhoun	S. J. Sibley, Hardin.
Carroll	John Hay, Mount Carroll.
Cass	Walter E. Buck, Virginia.
Champaign	Charles H. Watts, Urbana.
Christian	H. L. Fowkes, Taylorville.
Clark	Harold Bright, Marshall.
Clay	G. O. Lewis, Louisville.
Clinton	Wm. Johnston, Carlyle.
Coles	O. L. Minter, Charleston.
Cook	E. J. Tobin, Chicago (C. H.).
Crawford	James T. Athey, Robinson.
Cumberland	L. C. Markwell, Toledo.
Dekalb	W. W. Coultas, Sycamore.
Dewitt	John L. Costley, Clinton.
Douglas	E. E. Gere, Tuscola.
Dupage	R. T. Morgan, Wheaton.
Edgar	O. Rice Jones, Paris.
Edwards	Grant Balding, Albion.
Effingham	J. W. Davis, Effingham.
Fayette	F. E. Crawford, Vandalia.
Ford	H. M. Rudolph, Paxton.
Franklin	H. Clay Ing, Benton.
Fulton	M. M. Cook, Lewiston.
Gallatin	J. L. Greenlee, Equality.
Greene	Rollins L. Scott, Carrollton.
Grundy	C. H. Root, Morris.
Hamilton	W. W. Daily, McLeansboro.
Hancock	S. D. Faris, Carthage.
Hardin	Hattie M. Rittenhouse, Elizabethtown.
Henderson	Allen L. Beall, Oquawka.
Henry	A. L. Odenweller, Cambridge.

XII.—COUNTY AND OTHER LOCAL SUPERINTENDENTS OF SCHOOLS—Continued.

County.	County superintendent.
ILLINOIS—contd.	
Iroquois	F. A. Gilbreath, Watseka.
Jackson	Otto F. Aken, Murphysboro.
Jasper	E. B. Brooks, Newton.
Jefferson	Charles F. Lee, Mount Vernon.
Jersey	Joseph W. Becker, Jerseyville.
Jo Daviess	B. L. Birkbeck, Galena.
Johnson	Emma Rebman, Vienna.
Kane	E. A. Ellis, Geneva.
Kankakee	S. D. Saltzgiver, Kankakee.
Kendall	George Elliott, Bristol.
Knox	W. F. Boyes, Galesburg.
Lake	T. A. Simpson, Waukegan.
La Salle	W. R. Foster, Ottawa.
Lawrence	Ed. Ashbaugh, Lawrenceville.
Lee	L. W. Miller, Dixon.
Livingston	W. E. Herbert, Pontiac.
Logan	E. H. Lukenbill, Lincoln.
McDonough	B. E. Decker, Macomb.
McHenry	A. M. Shelton, Crystal Lake.
McLean	B. C. Moore, Bloomington.
Macon	Mary W. Moore, Decatur.
Macoupin	George W. Solomon, Carlinville.
Madison	H. T. McCrea, Edwardsville.
Marion	M. A. Thrasher, Salem.
Marshall	E. P. Nichols, Lacon.
Mason	John Mehlhop, Havana.
Massac	W. A. Spence, Metropolis.
Menard	Mrs. E. B. Batterton, Petersburg.
Mercer	C. L. Gregory, Aledo.
Monroe	William C. Heyl, Waterloo.
Montgomery	Everett A. Lewey, Hillsboro.
Morgan	H. H. Vasconcellos, Jacksonville.
Moultrie	V. D. Roughton, Sullivan.
Ogle	J. E. Cross, Oregon.
Peoria	J. A. Hayes, Peoria.
Perry	Elmo W. Lee, Pinckneyville.
Piatt	Chas. McIntosh, Monticello.
Pike	John N. Clark, Pittsfield.
Pope	R. R. Randolph, Golconda
Pulaski	May S. Hawkins, Mound City.
Putnam	W. A. Paxson, Hennepin.
Randolph	L. W. Von Behren, Evansville.
Richland	Elmer Van Arsdall, Olney.
Rock Island	Lou M. Harris, Rock Island.
Saline	B. D. Gates, Harrisburg.
Sangamon	E. C. Pruitt, Springfield.
Schuyler	Calvin L. Cain, Rushville.
Scott	John P. Ward, Winchester.
Shelby	Lee W. Frazer, Shelbyville.
Stark	G. C. Baker, Toulon.
St. Clair	W. A. Hough, Belleville.
Stephenson	Cyrus Grove, Freeport.
Tazewell	Ben L. Smith, Pekin.
Union	Charles O. Otrich, Jonesboro.
Vermilion	Otis P. Haworth, Danville.
Wabash	W. H. Wetzel, Mount Carmel.
Warren	J. D. Regan, Monmouth.
Washington	Lee A. Friend, Nashville.
Wayne	J. B. Galbraith, Fairfield.
White	Charles H. Mossberger, Carmi.
Whiteside	H. B. Price, Morrison.
Will	F. M. Muhlig, Joliet.
Williamson	J. W. McKinney, Marion.
Winnebago	Mrs. Abbie Jewett Craig, Rockford.
Woodford	Roy L. Moore, Eureka.
INDIANA.	
Adams	E. S. Christen, Decatur.
Allen	D. O. McComb, Fort Wayne.
Bartholomew	Samuel Sharp, Columbus.
Benton	M. F. O'Rear, Fowler.
Blackford	M. C. Townsend, Hartford City.
Boone	E. M. Servies, Lebanon.
Brown	Grover G. Brown, Nashville.
INDIANA—contd.	
Carroll	T. W. Armstrong, Delphi.
Cass	J. E. Ludders, Logansport.
Clark	Saml. L. Scott, Jeffersonville.
Clay	Willis E. Akre, Brazil,
Clinton	M. D. Boulden, Frankfort.
Crawford	H. W. Toney, English.
Daviess	J. E. Gilley, Washington.
Dearborn	Geo. C. Cole, Lawrenceburg.
Decatur	James R. Crawley, Greensburg.
Dekalb	F. M. Merica, Auburn.
Delaware	Ernest J. Black, Muncie.
Dubois	Robert E. Eckert, Jasper.
Elkhart	A. E. Weaver, Goshen.
Fayette	E. Earl Lines, Connersville.
Floyd	Glenn V. Scott, New Albany.
Fountain	Guy A. Waldrip, Covington.
Franklin	James A. Fisher, Brookville.
Fulton	Thomas F. Berry, Rochester.
Gibson	Leland S. Cunningham, Princeton.
Grant	Charles H. Terrell, Marion.
Greene	Walter T. Brown, Bloomfield.
Hamilton	Walter Harger, Noblesville.
Hancock	G. J. Richman, Greenfield.
Harrison	A. O. Deweese, Corydon.
Hendricks	J. P. Snodgrass, Danville.
Henry	H. B. Roberts, Newcastle.
Howard	Albert F. Hutson, Kokomo.
Huntington	C. Funderburg, Huntington.
Jackson	Harry B. Henderson, Brownstown.
Jasper	Morgan L. Sterrett, Rensselaer.
Jay	W. R. Armstrong, Portland.
Jefferson	W. Guy Pender, Madison.
Jennings	S. E. Whitcomb, Vernon.
Johnson	W. J. Yount, Franklin.
Knox	E. N. Haskins, Vincennes.
Kosciusko	Jesse Bruner, Warsaw.
Lagrange	Arthur B. Cookerly, Lagrange.
Lake	F. H. Heighway, Crown Point,
Laporte	Fred R. Farnam, Laporte.
Lawrence	Wm. C. Roberts, Bedford.
Madison	J. W. Frazier, Anderson.
Marion	Lee E. Swails, Indianapolis.
Marshall	Floyd M. Annis, Plymouth.
Martin	C. O. Williams, Shoals.
Miami	Dorph H. Brown, Peru.
Monroe	W. H. Jones, Bloomington.
Montgomery	Karl C. James, Crawfordsville.
Morgan	Lewis Williams, Martinsville.
Newton	W. O. Schanlaub, Kentland.
Noble	Guy R. Hall, Albion.
Ohio	John L. Wessler, Rising Sun.
Orange	Jesse M. Trinkle, Paoli.
Owen	Albert Free, Spencer.
Parke	John H. Jollief, Rockville.
Perry	Lee B. Mullen, Cannelton.
Pike	Howard Brenton, Winslow.
Porter	Fred H. Cole, Valparaiso.
Posey	G. E. Behrens, Mount Vernon.
Pulaski	W. E. Tennell, Winamac.
Putnam	Frank Wallace, Greencastle.
Randolph	Lee L. Driver, Winchester.
Ripley	C. R. Hertenstein, Versailles.
Rush	C. M. George, Rushville.
Scott	W. S. Griffith, Scottsburg.
Shelby	W. Everson, Shelbyville.
Spencer	J. W. Strassell, Rockport.
Starke	J. Allen Barr, Knox.
St. Joseph	Ralph Longfield, South Bend.
Steuben	H. Lyle Shank, Angola.
Sullivan	Richard Park, Sullivan.
Switzerland	Ernest Danglade, Vevay.
Tippecanoe	C. V. Peterson, La Fayette.
Tipton	Elmer L. Mitchell, Tipton.
Union	Chas. C. Abernethy, Liberty.
Vanderburg	K. W. Hemmer, Evansville.
Vermilion	R. H. Valentine, Newport.
Vigo	J. M. Propst, Terre Haute.

.—County and Other Local Superintendents of Schools—Continued.

ounty.	County superintendent.
A—contd.	
	A. B. Oswalt, Wabash.
	Harry Evans, Williamsport.
	Ivor J. Robinson, Boonville.
gton	Orra Hopper, Salem.
	C. O. Williams, Richmond.
	A. R. Huyette, Bluffton.
	Henry J. Reid, Monticello.
	A. R. Fleck, Columbia City.
OWA.	
	Minerva Whittum, Greenfield.
	Anna Lynam, Corning.
kee	W. L. Peck, Waukon.
ose	Janet Wilson, Centerville.
n	Ella M. Stearns, Audubon.
	Della Lutes, Vinton.
awk	H. C. Moeller, Waterloo.
	Gracia E. Tucker, Boone.
	May E. Francis, Waverly.
an	A. E. Jewett, Independence.
ista	A. E. Harrison, Storm Lake.
	E. B. Hodges, Allison.
	Jeanette Lewis, Rockwell City.
	George Galloway, Carroll.
	Jennie M. Ward, Atlantic.
	Mildred R. Yule, Tipton.
ordo	Fred D. Cram, Mason City.
e	Margaret Montgomery, Cherokee.
aw	Alf Vaala, New Hampton.
	Bessie Hart, Osceola.
	D. M. Odle, Spencer.
	Carl F. Becker, Elkader.
	C. E. Cozzens, Clinton.
d	F. N. Olry, Denison.
	May A. Hills, Adel.
	H. C. Brown, Bloomfield.
	Kate Hull, Leon.
re	W. A. Ottilie, Manchester.
nes	Wm. Dunlavey, Burlington.
on	F. S. Willey, Spirit Lake.
e	Joseph Flynn, Dubuque.
	Marie Sorum, Estherville.
	N. J. Breckner, West Union.
	Mary D. Korinke, Charles City.
n	Harry J. Henderson, Hampton.
t	Edith Anderson, Sidney.
	H. C. Roelofsz, Jefferson.
	D. R. Earl, Grundy Center.
	I. M. Boggs, Guthrie Center.
m	E. F. Snow, Webster City.
k	J. R. Baggs, Garner.
	Blanche Stoddard, Eldora.
n	Marie Case, Logan.
	Carolyn Campbell, Mount Pleasant.
	Zina Fessenden, Cresco.
ldt	Clarence Messer, Humboldt.
	Julia Jacobs, Ida Grove.
	G. A. Yoakum, Marengo.
	E. R. Stoddard, Maquoketa.
	Lucy E. Hall, Newton.
	June Chidester, Fairfield.
	N. E. Hessenius, Iowa City.
	Kate Maurice, Anamosa.
	Harry S. McVicker, Sigourney.
	Wm. Shirley, Algona.
	E. C. Lynn, Donnellson.
	Lula B. Secrist, Marion.
	Myrtle Jamison, Wapello.
	Myrtle A. Dungan, Chariton.
	E. T. Gilman, Rock Rapids.
	Carrie E. Ludlow, Winterset.

County	County superintendent.
IOWA—contd.	
Mahaska	A. E. Jones, Oskaloosa.
Marion	Mae Goldizen, Knoxville.
Marshall	C. E. Shutt, Marshalltown.
Mills	Geo. E. Masters, Glenwood.
Mitchell	Blanche M. Laughlin, Osage.
Monona	Ella M. Gardner, Onawa.
Monroe	Myrta Harlow, Albia.
Montgomery	Elizabeth Hugus, Red Oak.
Muscatine	E. D. Bradley, Muscatine.
O'Brien	J. J. Billingsly, Primghar.
Osceola	Mary E. De Boos, Sibley.
Page	Agnes Samuelson, Clarinda.
Palo Alto	Florence Underwood, Emmetsburg.
Plymouth	Erna H. Plath, Le Mars.
Pocahontas	Grace D. Bradshaw, Pocahontas.
Polk	Mrs. H. Huffman, Des Moines.
Pottawattamie	Charlotte Dryden, Council Bluffs.
Poweshiek	Estelle Coon, Brooklyn.
Ringgold	Louise Askren, Mount Ayr.
Sac	P. A. Lauterbach, Sac City.
Scott	Henry E. Ronge, Davenport.
Shelby	Rose M. Parker, Harlan.
Sioux	Charles H. Tye, Orange City.
Story	Maude Wakefield, Nevada.
Tama	Mary A. Richards, Toledo.
Taylor	Allie Nelson, Bedford.
Union	William Bell, Creston.
Van Buren	H. B. Carroll, Keosauqua.
Wapello	R. L. Gardner, Ottumwa.
Warren	W. M. McGee, Indianola.
Washington	Katherine Stichter, Washington.
Wayne	Ava Amenell, Corydon.
Webster	Anna Johnson, Fort Dodge.
Winnebago	Jessie Parker, Forest City.
Winneshiek	H. E. Miller, Decorah.
Woodbury	J. F. Garnes, Sioux City.
Worth	O. L. Varland, Northwood.
Wright	Blanche Bork, Clarion.
KANSAS.	
Allen	Lavonia M. Donica, Iola.
Anderson	Josie Henderson, Garnett.
Atchison	D. Anna Speer, Atchison.
Barber	Lola Lichlyter, Medicine Lodge.
Barton	W. L. Bowersox, Great Bend.
Bourbon	May Hare, Fort Scott.
Brown	Alma McAtee, Hiawatha.
Butler	H. I. French, El Dorado.
Chase	Katherine Montgomery, Cottonwood Falls.
Chautauqua	Carrie Belmon, Sedan.
Cherokee	G. A. Sanders, Columbus.
Cheyenne	Robert Cram, St. Francis.
Clark	Maggie M. Myers, Ashland.
Clay	Mrs. Sue Hemphill, Clay Center.
Cloud	Jane Collins, Concordia.
Coffey	Cora E. Arnold, Burlington.
Comanche	Mary Willard, Coldwater.
Cowley	Edna L. Johnson, Winfield.
Crawford	J. W. Miley, Girard.
Decatur	Elwood M. Brooks, Oberlin.
Dickinson	Mary E. Woolverton, Abilene.
Doniphan	C. R. Hewins, Troy.
Douglas	O. J. Lane, Lawrence.
Edwards	Mary Mullikin, Kinsley.
Elk	H. A. Gilmore, Howard.
Ellis	Louis Christiansen, Hays.
Ellsworth	H. Coover, Ellsworth.
Finney	Emma F. Wilson, Garden City.
Ford	Esther Wilkinson, Dodge City.

XII.—COUNTY AND OTHER LOCAL SUPERINTENDENTS OF SCHOOLS—Continued.

County.	County superintendent.
KANSAS—contd.	
Franklin	W. A. Vickers, Ottawa.
Geary	Nora R. Clark, Junction City.
Gove	B. B. Bacon, Gove.
Graham	U. S. Loyd, Hill City.
Grant	Miss Deane Miller, New Ulysses.
Gray	Edith Miller, Cimarron.
Greeley	August Halfman, Tribune.
Greenwood	Mary L. Service, Eureka.
Hamilton	C. W. Noell, Syracuse.
Harper	J. C. Palmer, Anthony.
Harvey	Ruth E. Mitten, Newton.
Haskell	George B. Levitt, Santa Fe.
Hodgeman	Winifred T. Goller, Jetmore.
Jackson	F. R. Palmer, Holton.
Jefferson	Annie Goddard, Oskaloosa.
Jewell	Lula Coyner, Mankato.
Johnson	Zilpah Boone, Olathe.
Kearny	Mrs. India Simmons, Lakin.
Kingman	J. W. Wilson, Kingman.
Kiowa	A. A. Hodges, Greensburg.
Labette	Ida B. Marley, Oswego.
Lane	Wm. T. Caldwell, Dighton.
Leavenworth	E. Voorhees, Leavenworth.
Lincoln	G. H. Hower, jr., Lincoln.
Linn	Maude Hunts, Mound City.
Logan	Malcolm Peterson, Russell Springs.
Lyon	Mrs. Nettie B. Cartmel, Emporia.
McPherson	I. C. Meyer, McPherson.
Marion	J. A. Ray, Marion.
Marshall	W. H. Seaman, Marysville.
Meade	Ola Granger, Meade.
Miami	Maggie Routt, Paola.
Mitchell	Philip Louthan, Beloit.
Montgomery	Ethel A. Gillespie, Independence.
Morris	Flora E. Davis, Council Grove.
Morton	Mrs. W. N. Newby, Richfield.
Nemaha	W. R. Anthony, Seneca.
Neosho	J. A. Cannan, Erie.
Ness	Edna Robison, Ness City.
Norton	Pearl Wyrill, Norton.
Osage	C. A. Deardorff, Lyndon.
Osborne	Bertha Yoxall, Osborne.
Ottawa	Miss Lilias Mortimer, Minneapolis.
Pawnee	Bertha Pruett, Larned.
Phillips	Olive L. Thomas, Phillipsburg.
Pottawatomie	R. C. Walden, Westmoreland.
Pratt	L. Grace Heaton, Pratt.
Rawlins	Bert Kesselring, Atwood.
Reno	S. P. Rowland, Hutchinson.
Republic	Mary Jansky, Belleville.
Rice	Bertha McCabe, Lyons.
Riley	Reppie Carey, Manhattan.
Rooks	Jennie Walsh, Stockton.
Rush	E. A. Kirkpatrick, La Crosse.
Russell	Caleb Bolmer, Russell.
Saline	W. H. Stewart, Salina.
Scott	Genevieve Lancaster, Scott.
Sedgwick	R. M. Crum, Wichita.
Seward	Emma Thompson, Liberal.
Shawnee	M. Edna Corbett, Topeka.
Sheridan	Warner Johnson, Hoxie.
Sherman	Nona Stewart, Goodland.
Smith	Wm. McMullen, Smith Center.
Stafford	Anna M. Beck, St. John.
Stanton	Nellie Craig, Johnson.
Stevens	Mary Burns, Hugoton.
Sumner	John R. Brooks, Wellington.
Thomas	Alice Bieber, Colby.
Trego	Mrs. Minnie O'Niel, Wakeeney.
Wabaunsee	Annie G. Crouch, Alma.
Wallace	Rose Gilbert, Sharon Springs.
Washington	Millie Spence-Gillett, Washington.
Wichita	P. E. Metheney, Leoti.
Wilson	Fannie Lyon, Fredonia.
Woodson	Elizabeth T. Spencer, Yates Center.
Wyandotte	Olive L. Thompson, Kansas City.
KENTUCKY.	
Adair	Noah Loy, Columbia.
Allen	N. S. Shaw, Scottsville.
Anderson	T. J. Leathers, Lawrenceburg.
Ballard	J. E. Lane, Wickliffe.
Barren	W. M. Totty, Glasgow.
Bath	R. W. Kincaid, Owingsville.
Bell	John Hays, Pineville.
Boone	J. C. Gordon, Burlington.
Bourbon	J. B. Caywood, Paris.
Boyd	B. B. Triplett, Catlettsburg.
Boyle	Oscar B. Fallis, Danville.
Bracken	Nannie Hancock, Brooksville.
Breathitt	Fallen Campbell, Jackson.
Breckinridge	J. Raleigh Meader, Hardinsburg.
Bullitt	Ora L. Roby, Shepherdsville.
Butler	C. E. Gary, Morgantown.
Caldwell	H. W. Nichols, Princeton.
Calloway	R. E. Broach, Murray.
Campbell	J. W. Reiley, Alexandria.
Carlisle	N. J. Parsons, Bardwell.
Carroll	Clay Tharp, Carrollton
Carter	Lelia B. Wilcox, Grayson.
Casey	E. L. Cunliff, Liberty.
Christian	L. E. Foster, Hopkinsville.
Clark	Nancy Stevenson, Winchester.
Clay	Davis M. Allen, Manchester.
Clinton	J. O. Cole, Albany.
Crittenden	James L. F. Paris, Marion.
Cumberland	Cora S. Payne, Burkesville.
Daviess	John L. Graham, Owensboro.
Edmonson	W. A. Pardue, Brownsville.
Elliott	Wales S. Brown, Sandy Hook.
Estill	E. S. Land, Irvine.
Fayette	Nannie G. Faulconer, Lexington.
Fleming	M. N. Evans, Flemingsburg.
Floyd	Tilden Collins, Prestonburg.
Franklin	L. D. Stucker, Frankfort.
Fulton	Virginia Luten, Hickman.
Gallatin	Rosa B. Wood, Warsaw.
Garrard	Jennie Higgins, Lancaster.
Grant	B. N. Harrison, Williamstown.
Graves	J. E. Coleman, Mayfield.
Grayson	Effie Sadler, Leitchfield.
Green	Myrtie F. Howard, Greensburg.
Greenup	J. Howard Hatfield, Greenup.
Hancock	J. H. Lamb, Hawesville.
Hardin	J. A. Payne, Elizabethtown.
Harlan	A. C. Jones, Harlan.
Harrison	B. F. Kearns, Cynthiana.
Hart	R. E. Jaggers, Munfordville.
Henderson	E. B. Liles, Henderson.
Henry	Hallie Ellis Pope, Newcastle.
Hickman	J. W. Brinkley, Clinton.
Hopkins	L. R. Ray, Madisonville.
Jackson	H. F. Minter, McKee.
Jefferson	Orville J. Stivers, Louisville.
Jessamine	C. C. Sandusky, Nicholasville.
Johnson	Fred Meade, Paintsville.
Kenton	J. C. Mills, Erlanger.
Knott	Adam Campbell, Hindman.
Knox	E. B. Hemphill, Barbourville.
Larue	Sara Castleman McConnell, Hodgenville.
Laurel	D. B. Johnson, London.
Lawrence	J. H. Ekers, Louisa.

NTY AND OTHER LOCAL SUPERINTENDENTS OF SCHOOLS—Continued.

	County superintendent.
mtd.	
.....	J. P. Thomas, Beattyville.
.....	Mary Hoskins, Hyden.
.....	E. B. Hale, Whitesburg.
.....	J. Q. Adams, Vanceburg.
.....	Garland Singleton, Stanford.
.....	H. D. Millen, Smithland.
.....	R. N. Beauchamp, Russellville.
.....	N. G. Martin, Eddyville.
.....	Ben F. Edwards, Richmond.
.....	J. S. Adams, Salyersville.
.....	J. W. Clarkson, Lebanon.
.....	Harry W. Peters, Benton.
.....	U. G. Johnson, Inez.
.....	G. H. Turnipseed, Maysville.
.....	M. V. Miller, Paducah.
.....	J. L. Harmon, Whitley City.
.....	Wallace T. Bennett, Calhoun.
.....	L. H. Powell, Brandenburg.
.....	W. O. Back, Frenchburg.
.....	Ora L. Adams, Harrodsburg.
.....	R. A. Palmore, Edmonton.
.....	S. C. Ray, Tompkinsville.
.....	Georgia V. Sledd, Mount Sterling.
.....	Bernard E. Whitt, West Liberty.
.....	V. M. Moseley, Greenville.
.....	W. T. McClain, Bardstown.
.....	Eda S. Taylor, Carlisle.
.....	E. S. Howard, Hartford.
.....	J. W. Selph, La Grange.

County	County superintendent.
KENTUCKY—contd.	
Owen.............	O. V. Jones, Owenton.
Owsley............	A. J. Creech, Booneville.
Pendleton.........	John E. Drake, Falmouth.
Perry.............	J. C. Napier, Hazard.
Pike..............	Fonzo Wright, Pikeville.
Powell............	Dudley Caudell, Stanton.
Pulaski...........	Leonard E. Meece, Somerset.
Robertson.........	Cleveland Moore, Mount Olivet.
Rockcastle........	Alice Davis, Mount Vernon.
Rowan.............	J. H. Powers, Morehead.
Russell...........	B. A. Lawless, Jamestown.
Scott.............	Mary Bradley, Georgetown.
Shelby............	Mrs. M. L. Hall, Shelbyville
Simpson...........	Alice Adams, Franklin.
Spencer...........	Katie B. Beauchamp, Taylorsville.
Taylor............	Geo. E. Sapp, Campbellsville.
Todd..............	H. G. Watson, Elkton.
Trigg.............	Levi Cunningham, Cadiz.
Trimble...........	Carrie Logan Hood, Bedford.
Union.............	G. W. Curry, Morganfield.
Warren............	Eugenia Roemer, Bowling Green.
Washington........	C. B. Bottom, Springfield.
Wayne.............	Hattie Denney, Monticello.
Webster...........	Thos. W. Johnson, Dixon.
Whitley...........	Samuel E. Walker, Williamsburg.
Wolfe.............	Taylor Shockey, Campton.
Woodford..........	M. B. Hifner, Versailles.

	Parish superintendent.
.....	J. W. Oxford, Crowley.
.....	R. G. Corkern, Oberlin.
.....	H. P. Broussard, Donaldsonville.
.....	S. A. Alleman, Napoleonville.
.....	J. M. Barham, Marksville.
.....	W. B. Hatcher, Baton Rouge.
.....	J. H. Bres, Port Allen.
.....	L. D. McCollister, De Ridder.
.....	E. H. Fisher, Arcadia.
.....	W. A. Fortson, Benton.
.....	C. E. Byrd, Shreveport.
.....	F. K. White, Lake Charles.
.....	E. B. Cottingham, Columbia.
.....	T. W. McCall, Grand Chenier.
.....	Ward Anderson, Lake Providence.
.....	W. McG. Dollerhide, Pioneer.
.....	H. W. Wright, Harrisonburg.
.....	J. H. Davidson, Homer.
.....	D. C. Strickler, Vidalia.
.....	G. O. Houston, Mansfield.
.....	E. E. Ortego, Ville Platte.
.....	E. R. Waller, Clinton.
.....	R. E. Crump, St. Francisville.
.....	J. L. McDuff, Winnsboro.
.....	J. N. Warner, Pollock.
.....	L. A. Walet, New Iberia.
.....	L. E. Messick, Plaquemine.
.....	R. L. Dickerson, Jonesboro.
.....	J. C. Ellis, Gretna.
s.....	W. P. Arnette, Jennings.
.....	L. J. Alleman, Lafayette.

Parish.	Parish superintendent.
LOUISIANA—contd.	
Lafourche..........	W. S. Lafargue, Thibodaux.
La Salle...........	W. T. Hodges, Jena.
Lincoln............	D. G. Armstrong, Ruston.
Livingston	J. E. Coxe, Denham Springs.
Madison............	J. R. Linton, Tallulah.
Morehouse..........	S. A. Caldwell, Bastrop.
Natchitoches.......	L. E. Hudson, Natchitoches.
Orleans............	J. M. Gwinn, New Orleans.
Ouachita...........	T. O. Brown, Monroe.
Plaquemines........	J. C. Blanchard, Pointe a la Hache.
Pointe Coupee......	Alonzo McFarland, New Roads.
Rapides............	C. C. Henson, Alexandria.
Red River..........	A. H. Horton, Coushatta.
Richland...........	E. E. Keebler, Rayville.
Sabine.............	W. S. Mitchell, Many.
St. Bernard........	Clement Story, New Orleans.
St. Charles........	J. B. Martin, Hahnville.
St. Helena.........	W. E. Phillips, Greensburg.
St. James..........	J. N. Gourdain, Convent.
St. John the Baptist	L. F. Laurent, Edgard.
St. Landry.........	W. B. Prescott, Opelousas.
St. Martin.........	F. O. Chavez, St. Martinville.
St. Mary...........	Charles Gott, Franklin.
St. Tammany........	E. E. Lyon, Covington.
Tangipahoa.........	A. C. Lewis, Amite.
Tensas.............	T. M. Wade, St. Joseph.
Terrebonne.........	H. L. Bourgeois, Houma.
Union..............	T. A. Green, Farmerville.
Vermilion..........	J. H. Williams, Abbeville.
Vernon.............	Finly Stanly, Leesville.
Washington.........	D. H. Springfield, Franklinton.
Webster............	T. W. Fuller, Minden.
Winn...............	J. J. Mixon, Winnfield.

XII.—County and Other Local Superintendents of Schools—Continued.

Towns in Union.	Union superintendent.
MAINE.[1]	
Abbot, Blanchard, Elliottsville Pl., Kingsbury Pl., Monson, Willimantic.	William E. Hebard, Carmel.
Acton, Lebanon, Newfield, Shapleigh.	George M. D. Grant, East Lebanon.
Addison, Centerville, Jonesboro, Jonesport.	D. H. Corson, Jonesport.
Albany, Lovell, Stoneham, Sweden.	A. B. Garcelon, North Lovell.
Albion, Burnham, Troy, Unity, Unity Pl.	Naomi T. Gregoire, Unity.
Alexander, Crawford, Grand Lake Str. Pl., No. 21 Pl. (Wash.), Princeton, Talmadge, Waite, Codyville Pl., Topsfield.	Charles H. Swan, Princeton.
Alfred, Sanford..........	Ralph P. Mitchell, Sanford.
Allagash Pl., Fort Kent, St. Francis Pl., St. John Pl.	Joseph F. Cyr, Fort Kent.
Alna, Dresden, Edgecomb, Pittston, Wiscasset.	Leslie A. Bailey, Dresden.
Alton, Argyle, Lagrange, Medford, Orneville.	Mrs. Kit B. Comstock, Oldtown R. 1.
Amherst, Aurora, Clifton, Mariaville, No. 21 Pl., No. 33 Pl., Otis, Waltham.	Carolyn B. Silsby, Amherst.
Amity, Cary Pl., Hodgdon, Linneus.	W. E. Finch, Hodgdon.
Andover, Byron, Mexico, Roxbury.	S. J. Rawson, Ridlonville.
Anson, Bingham, Embden, Solon.	Mrs. L. A. Bradbury, North Anson.
Appleton, Liberty, Palermo, Washington.	Albert F. Barnes, Liberty.
Arrowsic, Georgetown, Phippsburg, Westport, Woolwich.	Clara M. Reed, Woolwich.
Ashland, Garfield Pl., Masardis, Nashville Pl., Oxbow Pl., Portage Lake.	A. L. Shorey, Ashland.
Athens, Brighton Pl., Cambridge, Cornville, Harmony.	Carl T. Rhoades, Harmony.
Atkinson, Bradford, Charleston, Corinth, Kenduskeag.	H. E. Fortier, Charleston.
Avon, Freeman, Phillips, Salem, Strong.	Stephen T. Marshall, Strong.
Baileyville, Baring, Calais.	W. H. Phinney, Calais.
Baldwin, Hiram, Sebago	Celia H. Sanborn, East Hiram.
Bancroft, Drew Pl., Glenwood Pl., Haynesville, Kingman, Macwahoc Pl., Reed Pl.	Joseph W. Hamlin, Kingman.
Barnard Pl., Brownville, Lake View Pl., Milo, Williamsburg.	Foster L. Higgins, Milo.
Bath, West Bath.......	G. A. Stuart, Bath.
Beddington, Cherryfield, Columbia Falls, Deblois, Steuben.	Frances C. Jewett, Cherryfield.
Belfast, Searsport.......	E. E. Roderick, Belfast.
Belgrade, Fayette, Mount Vernon, Readfield.	Ralph G. Oakes, Mount Vernon.
Belmont, Lincolnville, Morrill, Northport, Searsmont.	Lena Rankin, Lincolnville.
Benedicta, Hersey, Mount Chase, Patten, Stacyville Pl.	A. L. Todd, Patten.
MAINE—continued.	
Benton, Fairfield.......	**W. M. Teague, Fairfield.**
Berwick, Eliot, South Berwick.	**W. C. McCue, Berwick.**
Bethel, Gilead, Greenwood, Mason.	**Charles E. Lord, Bethel.**
Bigelow Pl., Coplin Pl., Dead River Pl., Eustis, Flagstaff Pl., Lang Pl.	**Howard Gilpatrick, Stratton.**
Blaine, Bridgewater, E. Plantation, Mars Hill, Monticello.	**T. A. DeCosta, Mars Hill.**
Bluehill, Brooklin, Sedgwick.	**E. L. Linscott, Bluehill.**
Boothbay, Boothbay Harbor, Monhegan Pl., Southport.	**Walter L. Mason, Boothbay Harbor.**
Bowdoin, Bowdoinham, Richmond.	**E. R. Bowdoin, Richmond.**
Bowerbank, Dover, Foxcroft, Sebec.	**Wm. M. Bottomley, Foxcroft.**
Bradley, Greenbush, Greenfield, Milford, Passadumkeag.	**Gertrude E. Gifford, Olamon.**
Bremen, Nobleboro, Waldoboro.	**V. V. Thompson, Waldoboro.**
Brewer, Eddington, Holden, Veazie.	**F. W. Burrill, Brewer.**
Bridgton, Harrison, Naples.	**E. E. Russell, Bridgton.**
Bristol, Damariscotta, Newcastle, South Bristol.	**Julia E. Barker, Damariscotta.**
Brooks, Jackson, Monroe, Swanville, Waldo.	**Ernest L. Toner, Brooks.**
Brooksville, Castine, Penobscot, Islesboro.	**D. W. Rollins, Castine.**
Brookton, Danforth, Forest City, Orient, Vanceboro, Weston.	**J. F. Philbrook, Danforth.**
Brownfield, Denmark, Fryeburg, Stow.	**C. L. Clement, Fryeburg.**
Brunswick, Topsham...	**John A. Cone, Brunswick.**
Buckfield, Hartford, Hebron, Sumner.	**C. C. Tuttle, Buckfield.**
Bucksport, Orland, Orrington, Verona.	**Abbie E. Buck, Orland.**
Burlington, Edinburg, Enfield, Grand Falls Pl., Howland, Lowell, Maxfield, Seboeis Pl.	**Edward A. Simoneau, Howland.**
Buxton, Hollis, Standish.	**Fred Benson, West Buxton.**
Camden, Hope, Thomaston.	**B. E. Packard, Camden.**
Canaan, Clinton, Pittsfield.	**W. E. Stuart, Pittsfield.**
Canton, Livermore......	**F. E. Fortier, Canton.**
Cape Elizabeth, South Portland.	**Simon M. Hamlin, South Portland.**
Caratunk Pl., Concord, Mayfield Pl., Moscow, Pleasant Ridge Pl., The Forks Pl., West Forks Pl.	**Charles E. Ball, Bingham.**
Caribou, Limestone.....	**C. A. Grant, Caribou.**
Carmel, Dixmont, Etna, Newberg.	**W. E. Hebard, Carmel.**
Carroll, Lakeville Pl., Lee, Prentiss, Springfield, Webster Pl.	**G. H. Jewett, Springfield.**
Carthage, Dixfield, Peru, Weld.	**P. M. Cooper, Dixfield.**
Casco, Otisfield, Raymond.	**Gardiner W. Cole, Casco.**
Castle Hill, Chapman, Mapleton.	**Elmer H. Webber, Mapleton.**
Caswell Pl., Connor, Cyr Pl., Hamlin Pl., Van Buren.	**Charles L. O'Connell, Van Buren.**

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[1] Practically all city superintendents have supervision over some rural schools. **See also p. 78.**

XII.—County and Other Local Superintendents of Schools—Continued.

Towns in Union.	Union superintendent.
MAINE—continued.	
Charlotte, Cooper, Dennysville, Edmunds, Marion, Meddybemps, No. 14 Pl., Pembroke.	Ira B. Knight, West Pembroke.
Chelsea, Jefferson, Somerville, Whitefield, Windsor.	Raymond C. Beale, Whitefield.
Chester, Lincoln, Mattawamkeag, Winn, Woodville.	S. M. Nieveen, Mattawamkeag.
Chesterville, Industry, New Sharon, Vienna.	F. J. McAuliffe, New Sharon.
China, Vassalboro, Winslow.	George E. Paine, Winslow.
Columbia, Harrington, Milbridge.	Karl D. Lee, Harrington.
Corinna, Detroit, Newport, Plymouth.	Clifton E. Wass, Newport.
Cornish, Limington, Parsonsfield, Porter.	I. J. Merry, Cornish.
Cranberry Isles, Mount Desert, Southwest Harbor, Tremont.	W. E. Clark, Southwest Harbor.
Criehaven Pl., Matinicus Isle Pl., Union, Warren.	F. D. Rowe, Warren.
Crystal, Island Falls, Sherman, Silver Ridge Pl.	George C. Hight, Island Falls.
Cumberland, Falmouth, North Yarmouth.	D. W. Lunt, Portland, R. 4.
Cushing, Friendship, St. George, South Thomaston.	Harry C. Hull, Thomaston.
Cutler, Lubec, Trescott, Whiting.	M. E. Wright, Cutler.
Dallas Pl., Madrid, Rangeley, Rangeley Pl., Sandy River Pl.	J. M. Pike, Rangeley.
Dayton, North Kennebunkport, Saco.	T. T. Young, Saco.
Dedham, Ellsworth, Surry.	W. H. Patten, Ellsworth.
Deer Isle, Isle au Haut, Stonington.	John Paton, Deer Isle.
Dennistown Pl., Greenville, Jackman Pl., Long Pond Pl., Moose River Pl., Shirley.	Russell S. Taylor, Greenville.
Dexter, Garland, Ripley.	Jas. A. Hamlin, Dexter.
Durham, Lisbon, Webster.	A. R. Carter, Lisbon Falls.
Dyer Brook, Ludlow, Merrill, Moro Pl., New Limerick, Oakfield, Smyrna.	E. C. Vining, Smyrna Mills.
Eagle Lake, New Canada Pl., Wallagrass Pl., Winterville Pl.	Vital J. Labbe, Eagle Lake.
Eastbrook, Franklin, Hancock, Lamoine.	E. S. Higgins, Franklin.
East Livermore, Wayne.	John H. Carter, Livermore Falls.
East Machias, Machias, Machiasport, Marshfield, Northfield, Roque Bluffs, Whitneyville.	John C. Merrill, East Machias.
East Millinocket, Medway, Millinocket.	W. M. Marr, Millinocket.
Easton, Fort Fairfield...	C. E. Glover, Fort Fairfield.
Eastport, Perry, Robbinston.	W. H. Sturtevant, Eastport.
Eden, Trenton..........	Frank McGouldrick, Bar Harbor.
MAINE—continued.	
Exeter, Glenburn, Hudson, Levant, Stetson.	Elmer B. Eddy, Kenduskeag, R. F. D.
Farmingdale, Gardiner, Randolph.	L. A. Ross, Gardiner.
Farmington, New Vineyard, Temple.	Wm. B. Woodbury, Farmington.
Frankfort, Prospect, Stockton Springs, Winterport.	Frederick Nickerson, Frankfort.
Freedom, Knox, Montville, Thorndike.	Mrs. P. W. Berry, Thorndike.
Freeport, Pownal, Yarmouth.	Frank H. Byram, Freeport.
Frenchville, Grand Isle, Madawaska, St. Agatha.	B. S. Dufour, St. Agatha.
Gorham, Westbrook....	R. J. Libby, Westbrook.
Gouldsboro, Sorrento, Sullivan, Winter Harbor.	R. L. Sinclair, West Gouldsboro.
Gray, New Gloucester, Windham.	C. E. Varney, Gray.
Greene, Leeds, Turner..	Bertha Groden, Turner Center.
Guilford, Parkman, Sangerville, Wellington.	Walter J. Rideout, Sangerville.
Hallowell, Manchester, Winthrop.	W. F. Packard, Hallowell.
Hammond Pl., Houlton, Littleton.	T. P. Packard, Houlton.
Hampden, Hermon.....	W. E. Stoddard, Hampden.
Hanover, Milton Pl., Rumford.	L. E. Williams, Rumford.
Hartland, Palmyra, St. Albans.	H. B. Clifford, Hartland.
Highland Pl., Kingfield, Lexington Pl., New Portland.	Frank E. Baldwin, Kingfield.
Jay, Wilton............	Merton T. Goodrich, Jay.
Kennebunk, Kennebunkport.	Isaac H. Storer, Kennebunk.
Kittery, York..........	E. S. Foster, York.
Limerick, Lyman, Waterboro.	Florent Whitmore, East Waterboro.
Lincoln Pl., Magalloway Pl., Newry, Upton.	Charles S. Hulbert, Upton.
Litchfield, Monmouth, Wales, West Gardiner.	Harriet Fenderson, Litchfield.
Long Island Pl., North Haven, Swans Island, Vinalhaven.	Edward A. Smalley, Vinalhaven.
Madison, Skowhegan....	L. W. Gerrish, Skowhegan.
Mechanic Falls, Minot, Poland.	Harriet M. Spiller, Mechanic Falls.
Mercer, Norridgewock, Smithfield, Starks.	Orlando C. Woodman, Norridgewock.
New Sweden, Stockholm, Westmanland Pl., Woodland.	Clara C. Strom, New Sweden.
North Berwick, Wells...	C. A. Rush, Wells.
Norway, Oxford, Waterford.	True C. Morrill, Norway.
Oakland, Rome, Sidney.	John S. Tapley, Oakland
Old Orchard, Scarboro..	F. H. B. Heald, South Portland, R. 8.
Oldtown, Orono.........	W. O. Chase, Oldtown.
Paris, Woodstock.......	M. C. Joy, South Paris.
Perham, Wade, Washburn.	T. W. McQuaide, Washburn.
Presque Isle, Westfield..	S. E. Preble, Presque Isle.
Rockland, Rockport	R. L. West, Rockland.

XII.—County and Other Local Superintendents of Schools—Continued.

County.	County superintendent.	County.	County superintendent.
MARYLAND.		MARYLAND—contd.	
Allegany	Edward F. Webb, Cumberland.	Howard	W. C. Philips, Ellicott City.
Anne Arundel	George Fox, Annapolis.	Kent	Edward J. Clarke, Chestertown.
Baltimore	A. S. Cook, Towson.	Montgomery	Edwin W. Broome, Rockville.
Calvert	T. G. Bennett, Prince Frederick.	Prince Georges	E. S. Burroughs, Upper Marlboro.
Caroline	E. M. Noble, Denton.	Queen Annes	B. J. Grimes, Centerville.
Carroll	M. S. H. Unger, Westminster.	St. Marys	G. W. Joy, Leonardtown.
Cecil	Hugh W. Caldwell, Elkton.	Somerset	Wm. H. Dashiell, Princess Anne.
Charles	F. Bernard Gwynn, La Plata.	Talbot	Nicholas Orem, Easton.
Dorchester	J. B. Noble, Cambridge.	Washington	Raymond E. Staley, Hagerstown.
Frederick	G. Lloyd Palmer, Frederick.	Wicomico	James M. Bennett, Salisbury.
Garrett	F. E. Rathbun, Oakland.	Worcester	E. W. McMaster, Snow Hill.
Harford	C. M. Wright, Bel Air.		

Towns in union.	Union Superintendent.	Towns in union.	Union Superintendent.
MASSACHUSETTS.[1]		MASSACHUSETTS—contd.	
Acton, Carlisle, Littleton, Westford.	Frank H. Hill, Littleton.	Buckland, Colrain, Shelburne.	C. J. Richards, Shelburne Falls.
Acushnet, Fairhaven, Mattapoisett.	Charles F. Prior, Fairhaven.	Carver, Lakeville, Raynham, Rochester.	Chester W. Humphrey, Rochester.
Agawam, Ludlow	Walter E. Gushee, Ludlow.	Charlemont, Hawley, Heath, Rowe.	Frank P. Davison, Charlemont.
Alford, Egremont, Richmond, West Stockbridge.	Hattie L. Hawley, West Stockbridge.	Charlton, Leicester	George B. Clark, Leicester.
Amherst, Pelham	John D. Brooks, Amherst.	Chatham, Eastham, Harwich, Orleans.	Loring G. Williams, Harwich.
Ashburnham, Winchendon.	Albert J. Chidester, Winchendon.	Cheshire, Hancock, Lanesboro, New Ashford.	Everett G. Loring, Lanesboro.
Ashby, Lunenburg, Townsend.	Herman C. Knight, Townsend.	Chesterfield, Williamsburg, Worthington.	Elbridge W. Goodhue, Haydenville.
Ashfield, Cummington, Goshen, Plainfield.	Charles W. Walker, Ashfield.	Chilmark, Edgartown, Gay Head, Oak Bluffs, Tisbury, West Tisbury.	Robert W. Martin, Vineyard Haven.
Ashland, Hopkinton	Warren B. Lyman, Hopkinton.	Clarksburg, Florida, Monroe, Savoy.	D. F. Carpenter, North Adams.
Auburn, Sutton	R. W. Marton, Worcester.	Conway, Deerfield, Sunderland, Whateley.	Andrew S. Thompson, South Deerfield.
Avon, Holbrook, Randolph.	James J. Quinn, jr., Holbrook.	Dana, Greenwich, New Salem, Prescott.	C. C. Richardson, North Dana.
Ayer, Boylston, Shirley, West Boylston.	Frank C. Johnson, Ayer.	Douglas, Uxbridge	C. L. Judkins, Uxbridge.
Barre, Hardwick, Petersham.	Albert S. Cole, Barro.	Dover, Sudbury, Wayland.	Frank H. Benedict, Cochituate.
Becket, Chester, Middlefield.	William H. Sanderson, Chester.	Dracut, North Reading, Tewksbury, Tyngsborough.	Charles L. Randall, Lowell.
Bedford, Stoneham	Arthur B. Webber, Stoneham.	Dudley, Webster	William F. Sims, Webster.
Belmont, Burlington	George P. Armstrong, Belmont.	Duxbury, Marshfield, Scituate.	Charles A. Crowell, jr., Scituate.
Belchertown, Enfield	Alvin R. Lewis, Belchertown.	East Bridgewater, West Bridgewater.	Edgar H. Grout, East Bridgewater.
Bellingham, Hopedale, Mendon.	Francello G. Atwell, Hopedale.	Easthampton, Southhampton, Westhampton.	William D. Miller, Easthampton.
Berkley, Dighton, Rehoboth.	Mortimer H. Bowman, Dighton.	East Longmeadow, Hampden, Longmeadow, Wilbraham.	Leonora E. Taft, Springfield.
Berlin, Northboro, Shrewsbury, Southboro.	Frederick B. Van Ornum, Northboro.	Erving, Leverett, Shutesbury, Wendell.	Cora A. Stearns, Wendell Depot.
Blackstone, Millville, Seekonk.	Harry E. Gardner, Blackstone.	Essex, Hamilton, Lynnfield, Topsfield, Wenham.	Harvey R. Williams, Wenham.
Blandford, Huntington, Montgomery, Russell.	Melvin J. West, Huntington.	Foxboro, Norton, Plainville.	Ira A. Jenkins, Foxboro.
Bolton, Dunstable, Harvard, Pepperell.	Austin R. Paull, Pepperell.	Franklin, Wrentham	Arthur W. Hale, Franklin.
Bourne, Mashpee, Sandwich.	Herbert L. Whitman, Buzzards Bay.	Freetown, Gosnold, Westport.	Edward Hill, New Bedford.
Boxborough, Maynard, Stow.	W. H. Millington, Maynard.	Georgetown, Groveland, Rowley.	Josiah S. McCann, Groveland.
Brunfield, Monson	Frederic A. Wheeler, Monson.	Gill, Bernardston, Leyden, Northfield, Warwick.	Elmer F. Howard, East Northfield.
Brewster, Dennis, Yarmouth.	Alberto W. Small, Yarmouth.		
Brookfield, North Brookfield.	T. W. King, North Brookfield.		

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[1] Practically all city superintendents have supervision over some rural schools. See also pp. 79–80.

-County and Other Local Superintendents of Schools—Continued.

ns in Union.	Union superintendent.
CHUSETTS—con.	
, Upton.	
, South Hadley..	Frederick E. Whittemore, South Hadley Falls.
le, Sandisfield, wick, Tolland.	David J. Malcolm, Granville.
, Hatfield.	
, Kingston, Pem- , Plympton.	Geo. Allen Coe, Kingston.
r, Hanson, Nor-	Stephen G. Bean, Hanover.
le, Peru, Wash- , Windsor.	Hermann G. Patt, Hinsdale.
, Oakham, Pax- Rutland.	J. R. Childs, Holden.
l, Wales, Warren.	John Bacon, Warren.
ton, Medway, orn.	Carroll H. Drown, West Medway.
dston, Phillips- Royalston, Tem-	Asa M. Jones, Baldwinsville.
Monterey, Otis, gham.	Clarence E. Michels, Lee.

Towns in Union.	Union superintendent.
MASSACHUSETTS—con.	
Medfield, Millis, Norfolk, Westwood.	A. S. Ames, Medfield.
Merrimac, Newbury, Salisbury, West Newbury.	Leon E. Davis, West Newbury.
Millbury, Oxford	Chauncey C. Ferguson, Millbury.
Mount Washington, New Marlboro, Sheffield.	Alfred O. Tower, Sheffield.
New Braintree, Sturbridge, West Brookfield.	Frederick E. Bragdon, West Brookfield.
Princeton, Sterling, Westminster.	Harry C. Waldron, Leominster.
Provincetown, Truro, Wellfleet.	C. M. Pennell, Provincetown.
Somerset, Swansea	F. C. Tenney, Pottersville.
Wilmington, Boxford, Middleton.	Roscoe G. Frame, Wilmington.

ounty.	County commissioner.
CHIGAN.	
	Thomas B. Cook, Harrisville.
	Earle H. Sortore, Munising.
	C. L. Goodrich, Allegan.
	E. L. Little, Alpena.
	Archie C. Belding, Bellaire.
	G. H. Glasure, Standish.
	S. O. Clinton, Baraga.
	E. J. Edger, Hastings.
	J. B. Laing, Bay City.
	A. H. Upton, Frankfort.
	Mrs. E. H. Cole, St. Joseph.
	L. L. Livermore, Coldwater.
n	D. A. Davis, Marshall.
	Ruth H. Mosier, Dowagiac.
oix	May L. Stewart, East Jordan.
gan	Arthur L. Martin, Cheboygan.
wa	T. B. Aldrich, Brimley.
	A. H. Aldrich, Harrison.
	T. H. Townsend, St. Johns.
rd	James A. Kalahar, Frederic.
	C. U. Woolpert, Escanaba.
ion	D. O'Hara, Iron Mountain.
	Cynthia A. Green, Charlotte.
	H. S. Babcock, Harbor Springs.
ee	John L. Riegle, Flint.
n	C. J. Barnum, Gladwin.
	Laura Bowden, Ironwood.
Traverse	Lee Hornsby, Traverse City.
	H. A. Potter, Ithaca.
le	Harry McClave, Hillsdale.
on	William Bath, Houghton.
	W. H. Sparling, Bad Axe.
	F. E. Searl, Mason.
	Harvey H. Lowrey, Ionia.
	J. A. Campbell, Tawas City.
	John F. Mason, Crystal Falls.
	Frank E. Morrison, Mount Pleasant.
	W. W. McLain, Jackson.
azoo	Sheridan Mapes, Kalamazoo.
ka	Irene Louise Getty, Kalkaska.
	A. M. Freeland, Grand Rapids.

County.	County commissioner.
MICHIGAN—contd.	
Keweenaw	H. S. Winter, Mohawk.
Lake	Edwin G. Johnson, Luther.
Lapeer	C. H. Naylor, Lapeer.
Leelanau	H. R. Dumbrille, Glen Arbor.
Lenawee	G. J. Tripp, Adrian.
Livingston	H. G. Aldrich, Fowlerville.
Luce	Ann I. Auten, Newberry.
Mackinac	E. J. Lachance, St. Ignace.
Macomb	Will L. Lee, Mount Clemens.
Manistee	Elbert Gerred, Manistee.
Marquette	S. R. Anderson, Marquette.
Mason	C. A. Rinehart, Scottville.
Mecosta	C. G. Card, Big Rapids.
Menominee	Jesse Hubbard, Menominee.
Midland	B. G. Scollay, Midland.
Missaukee	J. Q. Zuck, Lake City.
Monroe	John G. Schafer, Monroe.
Montcalm	E. Straight, Stanton.
Montmorency	David W. Farrier, Atlanta.
Muskegon	Nellie B. Chisholm, Montague.
Newaygo	Carrie L. Carter, Fremont.
Oakland	A. L. Craft, Pontiac.
Oceana	Emma R. Hutchins, Hart.
Ogemaw	Josephine Woods, West Branch.
Ontonagon	A. C. Adair, Rockland.
Osceola	Geo. F. Roxburgh, Reed City.
Oscoda	John H. Speck, Fairview.
Otsego	R. F. Jennings, Vanderbilt.
Ottawa	N. R. Stanton, Holland.
Presque Isle	Martha A. Caldwell, Onaway.
Roscommon	W. M. Coon, Roscommon.
Saginaw	B. S. Tefft, Saginaw, W. S.
St. Clair	E. T. Blackney, Port Huron.
St. Joseph	Lewis Miller, Centerville.
Sanilac	W. J. Musselman, Sandusky.
Schoolcraft	W. T. S. Cornell, Manistique.
Shiawassee	H. E. Slocum, Corunna.
Tuscola	B. H. McComb, Caro.
Van Buren	E. V. Root, Paw Paw.
Washtenaw	Evan Essery, Ann Arbor.
Wayne	E. W. Yost, Detroit.
Wexford	Roy Noteware, Cadillac.

XII.—COUNTY AND OTHER LOCAL SUPERINTENDENTS OF SCHOOLS—Continued.

County.	County superintendent.
MINNESOTA.	
Aitkin	Mrs. C. S. Young, Aitkin.
Anoka	Geo. D. Goodrich, Anoka.
Becker	Anna G. Rogstad, Detroit.
Beltrami	W. B. Stewart, Bemidji.
Benton	Agnes K. Burns, Sauk Rapids.
Bigstone	Anna Swenson, Ortonville.
Blue Earth	W. H. Detamore, Mankato.
Brown	Robt. B. Kennedy, New Ulm.
Carlton	Nora A. Nilson, Moose Lake.
Carver	F. L. Williams, Watertown.
Cass	R. F. Ross, Walker.
Chippewa	Petra Storaker, Montevideo.
Chisago	E. J. Cederholm, Lindstrom.
Clay	S. O. Tang, Moorhead.
Clearwater	John H. Sommervold, Bagley.
Cook	Wm. J. Clinch, Grand Marais.
Cottonwood	Alfred R. Iverson, Windom.
Crow Wing	Irma C. Hartley, Brainerd.
Dakota	Josephine Raetz, Hastings.
Dodge	Zena Cooper, Mantorville.
Douglas	Geo. Susens, Alexandria.
Fairbault	Margaret E. Bieri, Blue Earth.
Fillmore	Oscar Carlson, Preston
Freeborn	Harold Dahlen, Albert Lea.
Goodhue	E. B. Bergquist, Red Wing.
Grant	Blanch L. Brennin, Elbow Lake.
Hennepin	H. I. Harter, Minneapolis, Courthouse.
Houston	Marie Otterness, Caledonia.
Hubbard	D. R. Bradford, Park Rapids.
Isanti	Mrs. M. B. Hixson, Cambridge.
Itasca	Mrs. Estelle Whipple, Grand Rapids.
Jackson	J. B. Arp, Jackson.
Kanabec	Willis Fairbanks, Mora.
Kandiyohi	W. D. Frederickson, Willmar.
Kittson	Hans Hanson, Hallock.
Koochiching	D. B. Jewell, International Falls.
Lac qui Parle	A. J. Kittleson, Madison.
Lake	Mrs. Alice W. Lawrence, Two Harbors.
Lesueur	J. A. Meagher, Lesueur Center.
Lincoln	J. T. Clawson, Ivanhoe.
Lyon	H. R. Painter, Marshall.
McLeod	Geo. F. Munier, Hutchinson.
Mahnomen	James Sweeney, Mahnomen.
Marshall	David Johnson, Warren.
Martin	C. J. Timms, Fairmont.
Meeker	Anna Onsdorff, Litchfield.
Millelacs	Olaf Wasenius, Princeton.
Morrison	M. E. Barnes, Little Falls.
Mower	Mrs. Eunice L. Rice, Austin.
Murray	Jennie Holm, Slayton.
Nicollet	Albert J. Holmstead, St. Peter.
Nobles	E. K. Sampson, Worthington.
Norman	Ida Rud Falconer, Ada.
Olmsted	Wm. L. Mercer, Rochester.
Ottertail	L. R. Adley, Fergus Falls.
Pennington	E. A. Mostue, Thief River Falls.
Pine	R. H. Blankenship, Pine City.
Pipestone	J. R. Campbell, Pipestone.
Polk	N. A. Thorson, Crookston.
Pope	Lena Otteson, Glenwood.
Ramsey	Geo. H. Reif, St. Paul, Courthouse.
Red Lake	Lou F. Green, Red Lake Falls.
Redwood	Mrs. Adella G. Pratt, Redwood Falls.
Renville	Amalia M. Bengtson, Olivia.
Rice	J. H. Lewis, Faribault.
Rock	Edia A. Headley, Luverne.
Roseau	Mrs. Bergit Billberg, Roseau.
St. Louis	N. A. Young, Duluth.
Scott	T. J. Nickolay, Shakopee.
Sherburne	Ada P. Conger, Becker.
MINNESOTA—contd.	
Sibley	W. M. Carver, Gaylord.
Stearns	W. A. Boerger, St. Cloud.
Steele	James A. Mork, Owatonna.
Stevens	Ray S. Roberts, Morris.
Swift	Tille S. Thomason, Benson.
Todd	E. A. Williams, Long Prairie.
Traverse	Bessie Caswell, Wheaton.
Wabasha	Harry V. Fick, Lake City.
Wadena	Maude R. Kennedy, Wadena.
Waseca	H. C. Van Loh, Waseca.
Washington	E. N. Swanson, Stillwater.
Watonwan	Mabel Madson, St. James.
Wilkin	A. S. Gredvig, Breckenridge.
Winona	A. C. Loomis, Winona.
Wright	A. A. Zech, Annandale.
Yellow Medicine	Lue A. Olds, Granite Falls.
MISSISSIPPI.	
Adams	M. C. Montgomery, Natches.
Alcorn	W. A. McCord, Corinth.
Amite	J. N. Steele, Liberty.
Attala	W. A. Hull, Kosciusko.
Benton	W. T. Renick, Ashland.
Bolivar	G. H. Armstrong, Cleveland.
Calhoun	J. O. Rich, Pittsboro.
Carroll	D. D. Fullilove, Vaiden.
Chickasaw	Geo. D. Riley, Houston.
Choctaw	J. F. Bridges, Chester.
Claiborne	S. J. Russell, Port Gibson.
Clarke	G. B. Parker, Quitman.
Clay	E. H. Walker, West Point.
Coahoma	J. M. Brooks, Clarksdale.
Copiah	A. A. McAlpin, Hazlehurst.
Covington	Alex. Newton, Collins.
De Soto	R. E. L. Morgan, Hernando
Forrest	E. J. Currie, Hattiesburg.
Franklin	W. L. Foreman, Meadville.
George	W. A. Avera, Lucedale.
Greene	Newton James, Leakesville.
Grenada	M. McKibben, Grenada.
Hancock	John Craft, Bay St. Louis.
Harrison	W. H. Wood, Gulfport.
Hinds	F. M. Coleman, Raymond.
Holmes	J. M. Kimbrough, Lexington.
Humphreys	T. D. Rice, Belzoni.
Issaguena	Geo. Robinson, Mayersville.
Itawamba	J. A. Senter, Fulton.
Jackson	A. Flurry, Pascagoula.
Jasper	C. E. Watkins, Bay Springs.
Jefferson	L. L. Posey, Fayette.
Jefferson Davis	W. W. Lee, Prentiss.
Jones	C. W. Jenkins, Laurel.
Kemper	D. W. Jackson, Dekalb.
Lafayette	C. A. McLarty, Oxford.
Lamar	A. Q. Broadus, Purvis.
Lauderdale	T. C. Lockard, Meridian.
Lawrence	W. L. McGahey, Monticello
Leake	C. M. Langford, Carthage.
Lee	T. M. Milam, Tupelo.
Leflore	J. R. Hughes, Greenwood.
Lincoln	Barney Grice, Brookhaven.
Lowndes	E. A. Stanley, Columbus.
Madison	G. R. Bennett, Canton.
Marion	E. I. Watts, Columbia.
Marshall	John P. Horton, Holly Spring.
Monroe	W. A. Addington, Aberdeen.
Montgomery	Guy C. Burton, Winona.
Neshoba	Ivy E. Peebles, Philadelphia.
Newton	M. G. Scarborough, Decatur.
Noxubee	J. G. Chandler, Macon.
Oktibbeha	C. E. Scroggins, Starkville.
Panola	C. B. Young, Sardis.
Pearl River	Leopold Locke, Poplarville.
Perry	W. F. Backstrom, New Augusta.
Pike	H. W. Kenna, Magnolia.
Pontotoc	J. R. Spencer, Pontotoc.
Prentiss	G. D. Chambers, Booneville R. No. 3.

XII.—County and Other Local Superintendents of Schools—Continued.

County.	County superintendent.
MISSISSIPPI—con.	
Quitman	F. M. Bizzell, Marks.
Rankin	H. H. Bullock, Brandon.
Scott	O. D. Loper, Forest.
Sharkey	J. N. Hall, Rolling Fork.
Simpson	J. R. Williamson, Mendenhall.
Smith	Allen Caughman, Raleigh.
Stone	C. H. Bass, Wiggins.
Sunflower	W. P. Sanders, Indianola.
Tallahatchia	R. H. Harrison, Charleston.
Tate	J. T. Cathey, Senatobia.
Tippah	J. E. Pearce, Ripley.
Tishomingo	N. L. Phillips, Iuka.
Tunica	L. C. Cannon, Tunica.
Union	T. O. Randall, New Albany.
Walthall	C. I. Brumfield, Tylertown.
Warren	J. H. Culkin, Vicksburg.
Washington	B. L. Hatch, Greenville.
Wayne	J. M. Wilkins, Waynesboro.
Webster	A. C. Webb, Walthall.
Wilkinson	John C. Day, Woodville.
Winston	Neal Prisock, Louisville.
Yalobusha	J. R. Hodnett, Water Valley.
Yazoo	Hugh Bull, Yazoo City.
MISSOURI.	
Adair	P. J. Fowler, Kirksville.
Andrew	Leslie M. Dobbs, Savannah.
Atchison	Gertrude Thompson, Rock Port.
Audrain	W. C. Johnson, Mexico.
Barry	W. E. Hankins, Cassville.
Barton	L. E. Brous, Lamar.
Bates	A. C. Moreland, Butler.
Benton	Chas. G. Harvey, Warsaw.
Bollinger	W. M. Welker, Marble Hill.
Boone	Geo. T. Porter, Columbia.
Buchanan	Geo. K. Gilpin, St. Joseph.
Butler	H. O. Harrawood, Poplar Bluff.
Caldwell	D. N. McClintock, Kingston.
Callaway	R. G. Hale, Fulton.
Camden	M. E. Johnson, Linn Creek.
Cape Girardeau	J. T. McDonald, Cape Girardeau.
Carroll	Mrs. Margaret Squires, Carrollton.
Carter	W. S. Perrin, Ellsinore.
Cass	C. A. Burke, Harrisonville.
Cedar	Ira A. McBride, Stockton.
Chariton	C. C. Carlstead, Keytesville.
Christian	Tom Mapes, Ozark.
Clark	Helen F. McKee, Kahoka.
Clay	E. L. Black, Liberty.
Clinton	Mrs. Anna L. Sims, Plattsburg.
Cole	A. H. Sieve, Jefferson City.
Cooper	S. F. Mauck, Bunceton.
Crawford	Wm. P. Summers, Steelville.
Dade	E. H. Carender, Greenfield.
Dallas	John A. Pitman, Buffalo.
Daviess	Hallie Burton, Gallatin.
Dekalb	W. O. Swails, Clarksdale.
Dent	Jas. W. Millsap, Salem.
Douglas	T. J. Moorhouse, Ava.
Dunklin	E. D. McAnally, Kennett.
Franklin	C. A. Cole, Union.
Gasconade	A. O. Mann, Hermann.
Gentry	Gretchen Jennings, Albany.
Greene	C. W. McCroskey, Springfield.
Grundy	Elizabeth Brainerd, Trenton.
Harrison	Nellie K. Sutton, Bethany.
Henry	Kathryn Spangler, Clinton.
Hickory	Oliver J. Watkins, Hermitage.
Holt	Mrs. Alberta G. Murphy, Oregon.
Howard	Luman L. Spry, Fayette.
Howell	W. C. McMillin, West Plains.
Iron	G. W. Hanson, Ironton.
MISSOURI—contd.	
Jackson	L. F. Blackburn, Independence.
Jasper	L. W. Kost, Carthage.
Jefferson	R. B. Wilson, Hillsboro.
Johnson	R. H. Boston, Warrensburg.
Knox	W. E. Cottey, Edina.
Laclede	G. C. Jones, Lebanon.
Lafayette	H. T. Phillips, Lexington.
Lawrence	Harry Moore, Mount Vernon.
Lewis	Lloyd H. Hicks, Monticello.
Lincoln	Sallie Brown, Troy.
Linn	E. L. Joyce, Brookfield.
Livingston	J. M. Gallatin, Chillicothe.
McDonald	P. M. Collings, Pineville.
Macon	O. L. Cross, Macon.
Madison	W. S. Cooper, Fredericktown.
Maries	C. D. Snodgrass, Vienna.
Marion	Frankie Connell, Hannibal.
Mercer	W. B. Kesterson, Princeton.
Miller	H. M. Atwell, Tuscumbia.
Mississippi	Mrs. Clara E. Graham, Charleston.
Moniteau	Edgar Strother, California.
Monroe	L. D. Ash, Paris.
Montgomery	W. F. Hupe, Montgomery City.
Morgan	M. Wray Witten, Versailles.
New Madrid	L. O. Swan, New Madrid.
Newton	W. E. Veerkamp, Neosho.
Nodaway	A. H. Cooper, Maryville.
Oregon	C. O. Custer, Alton.
Osage	R. H. Bryan, Linn.
Ozark	A. J. Kimball, Romance.
Pemiscot	Chas. G. Ross, Caruthersville.
Perry	ThomasCaruthers, Perryville.
Pettis	T. R. Luckett, Sedalia.
Phelps	A. Z. Black, Rolla.
Pike	O. A. Wilson, Bowling Green.
Platte	J. F. Sexton, Platte City.
Polk	Daisy Johnson, Bolivar.
Pulaski	L. J. Gladden, Laquey.
Putnam	H. U. G. Turnmire, Unionville.
Ralls	L. C. Northcutt, New London.
Randolph	S. B. McCully, Moberly.
Ray	W. T. McGaugh, Richmond.
Reynolds	J. G. Hartman, Centerville.
Ripley	C. N. Pennington, Doniphan.
St. Charles	Benj. H. Jolly, St. Charles.
St. Clair	C. E. Higgins, Osceola.
St. Francois	J. Clyde Akers, Farmington.
Ste. Genevieve	Vivan Gaty, Ste. Genevieve.
St. Louis	R. G. Russell, Clayton.
Saline	Jas. L. Lynch, Marshall.
Schuyler	J. F. Botts, Lancaster.
Scotland	Mrs. Arla Williams, Memphis.
Scott	M. E. Montgomery, Benton.
Shannon	Walter Webb, Eminence.
Shelby	Mrs. Myrtle Threlkeld, Shelbyville.
Stoddard	Mrs. C. E. Smith, Bloomfield.
Stone	L. V. Threlfall, Galena.
Sullivan	Roxana Jones, Milan.
Taney	J. W. Bennett, Forsyth.
Texas	James K. Connolly, Houston.
Vernon	Lizzie L. White, Nevada.
Warren	F. K. Kehr, Marthaville.
Washington	Burwell Fox, Potosi.
Wayne	C. E. Burton, Piedmont.
Webster	Sam A. Miller, Marshfield.
Worth	Mrs. Cora Early, Grant City.
Wright	John M. Carter, Hartville.
MONTANA.	
Beaverhead	L. Elizabeth Sutherland, Dillon.
Big Horn	Lucy Batty, Hardin.
Blaine	Margaret Vanden Sias, Chinook.
Broadwater	Opal Cronk, Townsend.

XII.—COUNTY AND OTHER LOCAL SUPERINTENDENTS OF SCHOOLS—Continued.

County.	County superintendent.
MONTANA—contd.	
Carbon	Asgerd Haaland, Red Lodge.
Cascade	Jane Keeney, Great Falls.
Chouteau	Elisabeth D. Milliken, Fort Benton.
Custer	Olive H. Lovett, Miles City.
Dawson	Camilla Osborne, Glendive.
Deer Lodge	May Russell, Anaconda.
Fallon	Mildred Lamb, Baker.
Fergus	Nellie Fahey, Lewistown.
Flathead	Mary Eckstein, Kalispell.
Gallatin	Ida W. Davis, Bozeman.
Granite	Mrs. Lottie T. Irvine, Philipsburg.
Hill	Laura G. Lovett, Havre.
Jefferson	Jennie Carlson, Boulder.
Lewis and Clark	May J. Crichton, Helena.
Lincoln	Carrie M. Spence, Libby.
Madison	Mary Bull, Virginia City.
Meagher	Mary J. Davies, White Sulphur Springs.
Mineral	Mrs. M. Leota Wright, Superior.
Missoula	Mabel Lindstadt, Missoula.
Musselshell	Minnie F. Ferguson, Roundup.
Park	Elsie Mercier, Livingston.
Phillips	Flora Sims, Malta.
Powell	Irene Coughlin, Deer Lodge.
Prairie	Annie E. Lowall, Terry.
Ravalli	Katherine Drayton Hamilton.
Richland	Emogene Lestra, Sidney.
Rosebud	Mrs. C. P. Adams, Forsyth.
Sanders	Ethel Toulmin, Thompson Falls.
Sheridan	Irene Murphy, Plentywood.
Silver Bow	Julia Shea, Butte.
Stillwater	Gertrude Sylvester, Columbus.
Sweet Grass	Inga Solberg, Big Timber.
Teton	Grace M. Thompson, Chouteau.
Toole	Mrs. Bertha Blacker, Shelby.
Valley	Nellie Johonnott, Glasgow.
Wilbaux	Mrs. Maude Banker-Wills, Wilbaux.
Yellowstone	Frances Miller, Billings.
NEBRASKA.	
Adams	Mary Dungan, Hastings.
Antelope	C. A. Mohrman, Neligh.
Arthur	Charles Harding, Arthur.
Banner	Minnie Larson, Harrisburg.
Blaine	A. L. Shamblin, Brewster.
Boone	Hannah C. Johnson, Albion.
Box Butte	Opal Russell, Alliance.
Boyd	Zazel Sloniger, Butte.
Brown	Mrs. Lena Morris, Ainsworth.
Buffalo	Kathryn Laugslin, Kearney.
Burt	W. T. Poucher, Tekamah.
Butler	Oma L. Cady, David City.
Cass	Alpha Peterson, Plattsmouth.
Cedar	Emma Schwerin, Hartington.
Chase	Addie P. Spangler, Imperial.
Cherry	Edith Adamson, Valentine.
Cheyenne	Anna McFadden, Sidney.
Clay	L. J. Gilkeson, Clay Center.
Colfax	F. J. Vogltance, Schuyler.
Cuming	Emma R. Miller, West Point.
Custer	T. C. Grimes, Broken Bow.
Dakota	Wilfred E. Voss, Dakota
Dawes	Edna Rincker, Chadron.
Dawson	W. C. Bloom, Lexington.
Deuel	Mrs. Retta F. Brown, Chappell.
NEBRASKA—con.	
Dixon	W. F. Richardson, Ponca.
Dodge	J. M. Matzen, Fremont.
Douglas	Thomas J. Keenan, Omaha.
Dundy	Una Richards, Benkelman.
Fillmore	Lillian D. Green, Geneva.
Franklin	Pearl O'Neal, Bloomington.
Frontier	Mable Keith, Stockville.
Furnas	G. W. Fletcher, Beaver City.
Gage	Thomas J. Trauernicht, Beatrice.
Garden	Esther Johnson, Oshkosh.
Garfield	Florence Alderman, Burwell.
Gosper	F. W. Montgomery, Elwood.
Grant	Theo. A. Frye, Hyannis.
Greeley	Margaret L. Tracy, Greeley.
Hall	Elizabeth Cunningham, Grand Island.
Hamilton	Arthur S. Nelson, Aurora.
Harlan	Frances E. White, Alma.
Hayes	H. O. Bixler, Hayes Center.
Hitchcock	Vida B. Day Martin, Trenton.
Holt	Minnie B. Miller, O'Neill.
Hooker	J. H. Garrett, Mullen.
Howard	W. G. Baker, St. Paul.
Jefferson	Henry Abrams, Fairbury.
Johnson	L. C. Custer, Tecumseh.
Kearney	Oscar Warp, Minden.
Keith	Katherine Feather, Ogalalla.
Keya Paha	Abbie F. Pelletier, Springview.
Kimball	Rachel McElroy, Kimball.
Knox	A. S. Stinson, Center.
Lancaster	Mrs. Minnie P. Knott, Lincoln.
Lincoln	Aileen Gantt, North Platte.
Logan	Alice Coleman Hill, Gandy.
Loup	Edith Wirsig, Taylor.
McPherson	O. A. Johnson, Tryon.
Madison	N. A. Housel, Madison.
Merrick	Margaret McCutchen, Central City.
Morrill	E. F. Kelley, Bridgeport.
Nance	Chloe Baldridge, Fullerton.
Nemaha	Bess E. Anderson, Auburn.
Nuckolls	Clyde W. Lehman, Nelson.
Otoe	Chas. Speedie, Nebraska City.
Pawnee	Elsie A. Hammond, Pawnee City.
Perkins	Belle Holaway, Grant.
Phelps	Alice A. Swanson, Holdrege.
Pierce	Lettie Scott, Pierce.
Platte	Fred S. Lecron, Columbus.
Polk	Amelia Rasmussen, Osceola.
Red Willow	Julia C. Barnes, McCook.
Richardson	D. H. Weber, Falls City.
Rock	Chas. G. Ammon, Bassett.
Saline	L. J. Bouchal, Wilber.
Sarpy	Cordelia Gramlich, Papillion.
Saunders	F. E. Alder, Wahoo.
Scotts Bluff	Ada Haldeman, Gering.
Seward	J. C. Greenwood, Seward.
Sheridan	Pearle E. Summers, Rushville.
Sherman	L. H. Currier, Loup City.
Sioux	Vinnie Newell, Harrison.
Stanton	Ilah B. Ohlson, Stanton.
Thayer	A. T. Holtzen, Hebron.
Thomas	Inez L. Oakes, Tredford.
Thurston	Carrie J. Kellner, Pender.
Valley	E. D. Clason, Ord.
Washington	N. T. Lund, Blair.
Wayne	Pearl Sewell, Wayne.
Webster	Gertrude L. Coon, Red Cloud.
Wheeler	Edith Bowler, Bartlett.
York	T. C. Lord, York.

XII.—County and Other Local Superintendents of Schools—Continued.

Towns in union.	Union superintendent.
NEW HAMPSHIRE.[1]	
Ashland, Rumney, Wentworth.	Clarence M. Harris, Ashland.
Claremont, Charlestown.	Alonzo J. Knowlton, Claremont.
Colebrook, Errol, Wentworth's Location.	Chas. O. Dalrymple, Colebrook.
Conway, Madison, Bartlett, Jackson Special.	Llewellyn M. Felch, North Conway.
Derry, Londonderry.	Charles W. Cutts, Derry.
Exeter, Newfields, Kensington, Hampton Falls, Hampton.	Maro S. Brooks, Exeter.
Franklin, Hill	George A. Keith, Franklin.
Goffstown, Bedford, New Boston.	Howard L. Winslow, Goffstown.
Gorham, Randolph, Shelburne.	Almon W. Bushnell, Gorham.
Greenland, Newington, Durham, Rye, North Hampton.	C. H. Walker.
Hampstead, Raymond, Epping.	Albert T. Lane.
Hanover, Plainfield.	Catherine L. Dole, Lebanon.
Hillsboro, Antrim, Peterboro.	Leon E. Prior, Hillsboro.
Hinsdale, Chesterfield, Francestown.	George O. Smith, Hinsdale.
Hopkinton, Weare, Dumbarton, Henniker.	Fred S. Libbey, Contoocook.
Lebanon, Enfield	H. Leslie Sawyer, Lebanon.
Lisbon, Landaff, Franconia, Lyman.	Leonard S. Morrison, Lisbon.
Littleton, Bethlehem Town.	Guy E. Speare, Littleton.
NEW HAMPSHIRE—con.	
Meredith, Woodstock, Gilford, New Hampton.	William H. Buker, Meredith.
Milford, Amherst, Hollis, Mont Vernon.	Alfred W. Smith, Milford.
Newport, New London, Sunapee.	W. H. S. Ellingwood, Newport.
Northwood, Deerfield, Lee, Nottingham.	Walton S. Adams, Northwood Center.
Pembroke, Allenstown, Merrimack.	Henry S. Roberts, Suncook.
Penacook, Hookset, Boscawen.	George W. Sumner, Penacook.
Pittsfield, Chichester, Loudon, Barnstead,	Frederick T. Johnson, Pittsfield.
Rochester, Rollinsford.	Charles A. Breck, Rochester.
Salem, Atkinson, Hudson.	James A. MacDougall, Salem.
Somersworth, New Market.	Edward H. Leonard, Somersworth.
Stratford, Northumberland, Columbia.	Orin M. Holman, North Stratford.
Swanzey, Dublin, Winchester, Harrisville.	Andrew P. Averill, Keene, R. F. D. 1.
Tilton, Belmont, Gilmanton.	Channing T. Sanborn, Tilton.
Troy, Fitzwilliam, Rindge, Jaffrey,	Lewis S. Record, East Jaffrey.
Walpole, Westmoreland, Langdon, Marlboro, Alstead.	Everett J. Best, Walpole.
Whitefield, Jefferson, Bethlehem Special.	Frank W. Jackson, Whitefield.
Wilton, Hancock, Temple, New Ipswich, Greenville.	Louis De Witt Record, Wilton.
Wolfeboro, Alton, Farmington, Tuftonboro, New Durham.	F. U. Landman, Wolfeboro.
Woodsville, Haverhill, Bath, Piermont.	Norman J. Page, Woodsville.

County.	County superintendent.
NEW JERSEY.	
Atlantic	H. M. Cressman, Egg Harbor City.
Bergen	B. C. Wooster, Hackensack.
Burlington	L. J. Kayser, Mount Holly.
Camden	C. S. Albertson, Camden.
Cape May	Aaron W. Hand, Cape May Court House.
Cumberland	J. J. Unger, Bridgeton.
Essex	Oliver J. Morelock, Newark.
Gloucester	D. T. Steelman, Woodbury.
Hudson	A. H. Updyke, Jersey City.
Hunterdon	J. S. Hoffman, Flemington.
Mercer	J. M. Arnold, Trenton.
Middlesex	H. B. Willis, New Brunswick.
Monmouth	C. J. Strahan, Freehold.
Morris	J. H. Hulsart, Morristown.
Ocean	C. A. Morris, Toms River.
Passaic	E. W. Garrison, Paterson.
Salem	H. C. Dixon, Salem.
Somerset	Henry C. Krebs, Somerville.
Sussex	Ralph Decker, Newton.
Union	A. L. Johnson, Elizabeth.
Warren	Howard E. Shimer, Belvidere
NEW MEXICO.	
Bernalillo	Atanasio Montoya, Albuquerque.
NEW MEXICO—con.	
Chaves	Mrs. T. W. Hayes, Roswell.
Colfax	Jay T. Conway, Raton.
Curry	J. M. Bickley, Clovis.
De Baca	Rachel V. Smith, Fort Sumner.
Dona Ana	R. E. McBride, Las Cruces.
Eddy	W. A. Poore, Carlsbad.
Grant	Miss I. L. Eckles, Silver City.
Gaudalupe	Bonifacio Lucero, Santa Rosa.
Lea	Sarah K. Ellis, Lovington.
Lincoln	J. E. Koonce, Carrizozo.
Luna	Mrs. Alice Smith, Deming.
McKinley	Palmer Ketner, Gallup.
Mora	Milnor Rudolph, Mora.
Otero	Lacy Simms, Alamogordo.
Quay	J. A. Atkins, Tucumcari.
Rio Arriba	Jose O. Garcia, Velarde.
Roosevelt	Sam J. Stinnett, Portales.
Sandoval	J. Felipe Castillo, Bernalillo.
San Juan	Earl Douglas, Aztec.
San Miguel	Benito F. Baca, Las Vegas.
Santa Fe	Nina Otero Warren, Santa Fe.
Sierra	Mrs. J. A. Dye, Hillsboro.
Socorro	Martin Lopez, Socorro.
Taos	Pablo Quintana, Taos.
Torrance	Charles L. Burt, Mountainair.
Union	H. H. Errett, Clayton.
Valencia	Saturnino Baca, Belen.

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[1] Practically all city superintendents have rural schools under their supervision. See list, p. 82.

XII.—County and Other Local Superintendents of Schools—Continued.

County.	District superintendent.
NEW YORK.[1]	
Albany	E. E. Richmond, Ravenna.
	W. J. Haverly, West Berne.
	Warren Ratcliffe, Cohoes.
Allegany	Frank L. Tuthill, Fillmore.
	John D. Jones, Cuba.
	O. M. Burdick, Little Genesee.
	W. H. Garwood, Canaseraga.
	Willet L. Ward, Wellsville.
Broome	Harvey B. Heath, Ouaquaga.
	J. E. Hurlburt, Windsor.
	K. E. Beilby, Union.
	Erwin B. Whitney, Whitney Point.
Cattaraugus	Joel J. Crandall, Franklinville.
	Gilbert A. Farwell, Hinsdale.
	C. S. Palmer, Salamanca.
	G. E. Waller, Little Valley.
	E. A. Stratton, Randolph.
Cayuga	H. S. R. Murphy, Cato.
	H. T. Morrison, Weedsport.
	Anna M. Kent, Union Springs
	G. B. Springer, Genoa.
	Mabel C. L. Rodger, Moravia.
Chautauqua	J. N. Palmer, Forestville.
	J. M. Barker, Niobe.
	Mrs. D. B. Connelly, Stowe.
	J. G. Pratt, Sherman.
	L. Waldo Swain, Westfield.
	J. S. Wright, Falconer.
Chemung	Walter C. King, Horseheads.
	Harriet Easterbrook, Elmira.
Chenango	Ellen E. Baldwin, Lincklaen.
	Albert C. Bowers, New Berlin.
	J. S. Childs, Oxford.
	Jane I. Schenck, Greene.
	Mary L. Isbell, Norwich.
Clinton	Oliver A. Wolcott, Keeseville.
	Ernest B. Sargeant, Ellenburg.
	Clara E. Soden, Mooers Forks.
Columbia	S. B. Smith, East Chatham.
	W. L. Millias, Valatie.
	M. G. Rickey, Clermont.
Cortland	W. K. Patrick, Cuyler.
	Ada M. Shuler, McGraw.
	C. D. Carter, Marathon, R. 3.
Delaware	C. W. Vandergrift, Sidney.
	Z. Le R. Myers, Downesville.
	E. O. Harkness, Delhi.
	Fayette Whitney, Roxbury.
	M. G. Nelson, Franklin.
	A. T. Hamilton, North Harpersfield.
Dutchess	Frank L. Haight, Fishkill.
	Clayton T. Sherman, Beacon.
	Clara E. Drum, Clinton Corners.
	F. O. Green, Tivoli.
Erie	C. A. Heist, Clarence.
	H. A. Dann, Lancaster.
	W. E. Pierce, East Aurora.
	E. D. Ormsby, North Collins.
	W. E. Bensley, Springville.
Essex	C. J. Mousaw, Schroon Lake.
	Gertrude M. Spear, Westport.
	Mattie J. Prime, Upper Jay.
Franklin	Myrtle E. MacDonald, Chateaugay.
	G. La Graff, Tupper Lake.
	F. H. Wilcox, North Bangor.
	Gertrude E. Hyde, Moira.
Fulton	Fred A. Stryker, Johnstown
	John Paris, Broadalbin.
Genesee	H. W. Dyer, East Pembroke.
	J. L. M. Uphill, Batavia.
Greene	Thos. C. Perry, Catskill.
	R. M. MacNaught, Windham.
	Walter J. Decker, Hunter.
NEW YORK—con.	
Hamilton	C. B. Hanley, Wells.
Herkimer	A. J. Rose, West Winfield.
	Silas C. Kimm, Herkimer.
	C. B. Keller, Little Falls.
	B. M. Robinson, Poland.
Jefferson	C. M. Pierce, Adams.
	W. J. Linnell, Brownville.
	T. B. Stoel, Clayton.
	R. W. Bowman, Sacketts Harbor.
	D. D. T. Marshall, Redwood.
	J. C. Knapp, Philadelphia.
Lewis	Glenn G. Steele, Croghan.
	Orson C. Babbitt, Copenhagen.
	Ruth M. Johnston, Port Leyden.
	A. W. Trainor, West Leyden.
Livingston	John P. Magee, Geneseo.
	G. C. McNinch, Conesus.
	R. G. Conklin, Tuscarora.
Madison	Irving S. Sears, Hamilton.
	Clayton J. Wratten, DeRuyter.
	E. A. Fuller, Morrisville.
	John B. Harris, Canastota.
Monroe	W. W. Rayfield, Webster.
	M. B. Furman, East Rochester.
	Fred W. Hill, Spencerport.
	John C. Malloch, Churchville.
Montgomery	N. Berton Alter, Fort Plain.
	Walter Elwood, Amsterdam.
Nassau	James S. Cooley, Mineola.
	W. C. Mepham, Merrick.
Niagara	W. D. Wisner, Ransomville.
	Orrin A. Kolb, Lockport, R. F. D. 5.
	M. Gazeller Hoffman, Lewiston.
Oneida	Ray P. Snyder, New York Mills.
	Harry C. Buck, Clayville.
	W. J. Lewis, Clinton.
	F. E. Mathewson, Verona.
	Stanton D. Austin, Barneveld.
	Pauline L. Scott, Blossvale.
	Daniel M. Blue, Boonville.
Onondaga	M. E. Hinman, Tully.
	G. T. Fuggle, Jamesville.
	E. E. McDowell, Memphis.
	Manford D. Green, Liverpool.
	Jennie A. Cowles, Skaneateles.
Ontario	Leon J. Cook, East Bloomfield.
	H. S. G. Loveless, Phelps.
	E. G. Soper, Seneca Castle.
	G. A. Bolles, Naples.
Orange	Theron L. McKnight, Central Valley.
	O. Eichenberg, Monroe.
	S. A. Cortright, Middletown.
Orleans	Mary J. Franklin, Medina.
	Cora V. Luttenton, Albion.
	Charles W. Smith, Holley.
Oswego	Mildred G. Pratt, Lacona.
	J. M. Bonner, Richland.
	Aura A. Cole, Constantia.
	Charles I. Kingsbury, Mexico.
	W. S. Gardner, Fulton.
Otsego	J. B. McManus, Cooperstown.
	Menzo Burlingame, Worcester.
	Grace A. Louden, Cooperstown.
	John E. Frederick, Oneonta.
	Harrison Cossaart, Morris.
	Floyd R. Thayer, Edmeston.
Putnam	A. J. Williams, Brewster.
Rensselaer	Mrs. C. B. Clark, Troy.
	Mrs. Adelaide W. Gardner, Stephentown.
	H. G. Grubel, East Greenbush.

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[1] Supervisory districts are counties in four cases; elsewhere, parts of counties.

XII.—County and Other Local Superintendents of Schools—Continued.

County.	District superintendent.
NEW YORK—con.	
Rockland	George W. Miller, Nanuet.
St. Lawrence	W. T. Clark, Hailesboro.
	F. H. Wallace, Morristown.
	Carlos S. Blood, Heuvelton.
	V. C. Warriner, Lisbon.
	Rose M. Libby, Colton.
	Mrs. E. D. Grubb, Norwood.
	E. F. McDonald, Massena.
	A. J. Fields, Winthrop.
Saratoga	A. A. Lavery, Round Lake.
	Lou Messinger, Ballston Spa.
	E. E. Hinman, Schuylerville.
	A. M. Hollister, Corinth.
Schenectady	Frank W. Palmer, Schenectady.
Schoharie	Leslie A. Tompkins, Jefferson.
	Silas Sprinstead, Cobleskill.
	R. W. Eldredge, Sharon Springs.
Schuyler	Alberta Spaulding, Burdett.
	Jennie M. Ellison, Reading Center.
Seneca	W. S. Wilson, Ovid.
	Charles B. Earl, Waterloo.
Steuben	Frank H. Smith, Addison.
	Winfred Morrow, Bath.
	Howard Harrison, Addison.
	F. C. Wilcox, Greenwood.
	H. M. Brush, Arkport.
	Guyon J. Carter, Avoca.
	J. G. McConnell, Prattsburg.
Suffolk	P. B. Matthews, Bridgehampton.
	J. Henry Young, Central Islip.
	Leonard J. Smith, Northport.
Sullivan	F. J. Lewis, Barryville.
	Charles S. Hick, Jeffersonville.
	Mrs. Emma C. Chase, Monticello.
NEW YORK—con.	
Tioga	A. E. Belden, Newark Valley.
	M. D. Goodrich, Tioga Center.
	H. T. Whittemore, Nichols.
Tompkins	Fred A. Beardsley, Trumansburg.
	Hattie K. Buck, North Lansing.
	John D. Bigelow, Ithaca.
Ulster	Emily S. Burnett, Kingston; Station R.
	J. U. Gillette, Port Ewen.
	J. M. Schoonmaker, Accord.
	W. J. Andrews, Oliverea.
Warren	F. F. Gunn, Glens Falls.
	J. R. Stickney, Bolton Landing.
	Mrs. Rose Minnick, Glens Falls.
Washington	Amelia Blasdell, Fort Ann.
	Mrs. E. M. S. Devine, Hudson Falls.
	Mary A. Potter, Greenwich, R. F. D. 4.
	F. H. Rich, Salem.
Wayne	Mrs. Helen C. Andrews, Lyons.
	Mrs. Ida E. Cosad, Wolcott.
	Albert H. McMurray, Walworth.
	R. O. Brundige, Ontario.
Westchester	S. J. Preston, White Plains.
	C. H. Cheney, White Plains.
	G. H. Covey, Katonah.
	R. D. Knapp, Purdy Station.
Wyoming	J. T. McGurren, Bliss.
	Harriet M. Patch, Cowlesville.
	G. H. Stratton, Castile.
Yates	J. F. Bullock, Penn Yan.
	E. P. Corbit, Rushville.

County.	County superintendent.
NORTH CAROLINA.	
Alamance	J. H. Flemming, Graham.
Alexander	A. F. Sharpe, Stony Point.
Alleghany	J. O. Joines, Stratford.
Anson	W. C. Bivens, Wadesboro.
Ashe	C. M. Dickson, Silas Creek.
Avery	Frank A. Edmonson, Newland.
Beaufort	H. H. McLean, Washington.
Bertie	H. W. Early, Windsor.
Bladen	B. J. Cromartie, Garland.
Brunswick	M. C. Guthrie, Southport.
Buncombe	W. H. Hipps, Asheville.
Burke	T. L. Sigmon, Morganton.
Cabarrus	J. B. Robertson, Concord.
Caldwell	R. M. Smith, Lenoir.
Camden	F. M. Eason, Camden.
Carteret	L. B. Emmett, Stella.
Caswell	G. A. Anderson, Yanceyville.
Catawba	George E. Long, Newton.
Chatham	F. M. Williamson, Pittsboro.
Cherokee	A. [illegible] Martin, Murphy.
Chowan	M. L. Wright, Edenton.
Clay	T. C. Scroggs, Hayesville.
Cleveland	J. Y. Irvin, Shelby.
Columbus	F. T. Wooten, Chadbourn.
Craven	S. M. Brinson, New Bern.
Cumberland	B. T. McBryde, Fayetteville.
Currituck	W. D. Cox, Moyock.
Dare	James E. Holmes, Manteo.
Davidson	S. G. Hasty, Lexington.
Davie	F. P. Bradley, Mocksville.
Duplin	M. H. Wooten, Kenansville.
Durham	C. W. Massey, Durham.
NORTH CAROLINA—continued.	
Edgecombe	R. E. Sentelle, Tarboro.
Forsyth	W. B. Speas, Winston-Salem.
Franklin	E. L. Best, Louisburg.
Gaston	F. P. Hall, Belmont.
Gates	J. H. Lassiter, Gatesville.
Graham	R. P. Jenkins, Stecoah.
Granville	J. F. Webb, Oxford.
Greene	J. E. Debnam, Snow Hill.
Guilford	Thos. R. Foust, Greensboro.
Halifax	A. E. Akers, Roanoke Rapids.
Harnett	B. P. Gentry, Lillington.
Haywood	R. A. Sentell, Waynesville.
Henderson	W. S. Shitle, Hendersonville.
Hertford	N. W. Britton, Winton.
Hoke	J. A. McRae, Raeford.
Hyde	G. M. Guthrie, Swan Quarter.
Iredell	James A. Steele, Statesville.
Jackson	J. N. Wilson, Cullowhee.
Johnston	L. T. Royall, Smithfield.
Jones	John R. Barker, Trenton.
Lee	E. M. Judd, Sanford.
Lenoir	Joseph Kinsey, Kinston.
Lincoln	L. B. Beam, Lincolnton.
McDowell	N. F. Steppe, Marion.
Macon	M. D. Billings, Franklin.
Madison	Fred C. Sams, Mars Hill.
Martin	A. J. Manning, Williamston.
Mechlenberg	J. M. Matthews, Charlotte.
Mitchell	D. W. Greene, Wing.
Montgomery	W. A. Cochran, Troy.
Moore	John A. McLeod, Carthage.
Nash	Oscar Creech, Nashville.

XII.—COUNTY AND OTHER LOCAL SUPERINTENDENTS OF SCHOOLS—Continued.

County.	County superintendent.
NORTH CAROLINA—continued.	
New Hanover	W. Catlett, Wilmington.
Northampton	P. J. Long, Jackson.
Onslow	W. M. Thompson, Jacksonville.
Orange	F. L. Foust, Hillsboro.
Pamlico	T. B. Attmore, Stonewall.
Pasquotank	W. M. Hinton, Elizabeth City.
Pender	T. T. Murphy, Burgau.
Perquimans	Charles Wheedbee, Hertford.
Person	J. A. Beam, Roxboro.
Pitt	S. B. Underwood, Greenville.
Polk	E. W. S. Cobb, Columbus.
Randolph	T. F. Bulla, Asheboro.
Richmond	L. J. Bell, Rockingham.
Robeson	J. R. Poole, Lumberton.
Rockingham	J. H. Allen, Reidsville.
Rowan	R. G. Kizer, Salisbury.
Rutherford	W. R. Hill, Rutherfordton.
Sampson	L. L. Matthews, Clinton.
Scotland	L. M. Peele, Laurinburg.
Stanly	E. F. Eddins, Palmerville.
Stokes	J. T. Smith, King.
Surry	J. H. Allen, Elkin.
Swain	J. M. Smiley, Bryson City.
Transylvania	A. F. Mitchell, Penrose.
Tyrrell	J. S. Spruill, Columbia.
Union	R. N. Nisbet, Monroe.
Vance	E. M. Rollins, Henderson.
Wake	Edgar W. Knight, Raleigh.
Warren	H. F. Jones, Warrenton.
Washington	John W. Darden, Plymouth.
Watauga	Smith Hagaman, Vilas.
Wayne	E. T. Atkinson, Goldsboro.
Wilkes	C. C. Wright, Hunting Creek.
Wilson	C. L. Coon, Wilson.
Yadkin	J. T. Reece, Yadkinville.
Yancey	W. O. Griffith, Windom.
NORTH DAKOTA.	
Adams	Rose Wagner, Hettinger.
Barnes	Minnie J. Nielson, Valley City.
Benson	Peter Anderson, Minnewaukan.
Billings	Mable I. Rapp, Medora.
Bottineau	H. E. Layne, Bottineau.
Bowman	H. O. Saxvik, Bowman.
Burke	C. H. Worf, Bowbells.
Burleigh	W. E. Parsons, Bismarck.
Cass	J. W. Riley, Fargo.
Cavalier	Fred J. Reher, Langdon.
Dickey	Mattie Crabtree, Ellendale.
Divide	J. H. Phelps, Crosby.
Dunn	Lois Viall Sanden, Manning.
Eddy	H. H. Maxwell, New Rockford.
Emmons	Lester Briggle, Linton.
Foster	Mary K. Beatty, Carrington.
Golden Valley	Mrs. Jessie L. Kinsey, Beach.
Grand Forks	M. Beatrice Johnstone, Grand Forks.
Grant	Mina Aasved, Carson.
Griggs	Tena P. Ragner, Cooperstown
Hettinger	Shirley Fox, Mott.
Kidder	Adria Williams, Steele.
Lamoure	Cora E. Sabin, Lamoure.
Logan	Sol R. Eilert, Napoleon.
McHenry	A. C. Berg, Towner.
McIntosh	Geo. A. Boeschinil, Ashley.
McKenzie	F. J. Steffeck, Schafer.
McLean	M. C. McCurdy, Washburn.
Mercer	E. D. Goodwin, Stanton.
Morton	H. K. Jensen, Mandan.
Mountrail	V. A. Lovell, Stanley.
Nelson	P. J. Iverson, Lakota.
Oliver	F. E. Karges, Center.
Pembina	Charlotte A. Jones, Cavalier.
Pierce	Sara C. Guss, Rugby.
Ramsey	John A. Haig, Devils Lake.
Ransom	C. E. Cavett, Lisbon.
NORTH DAKOTA—continued.	
Renville	Ludvig M. Rockne, Mohall.
Richland	Chas. Hanson, Wahpeton.
Rolette	Mrs. Mary K. Packard, Rolla.
Sargent	Henry Ulve, Forman.
Sheridan	E. O. Kleve, McClusky.
Sioux	L. W. Colebank, Swastika.
Slope	Mrs. H. H. Bond, Amidon.
Stark	C. E. Ward, Dickinson.
Steele	Aagot Raaen, Sherbrooke.
Stutsman	Mary E. McGinnis, Jamestown.
Towner	Mamie Sorenson, Cando.
Traill	Guri Wambheim, Hillsboro.
Walsh	W. J. Hoover, Grafton.
Ward	W. D. Wendt, Minot.
Wells	Senney Nertrost, Fessenden.
Williams	Anna M. Peterson, Williston.
OHIO.	
Adams	W. L. Hostetter, West Union.
Allen	C. A. Arganbright, Lima.
Ashland	J. N. Pinkerman, Ashland.
Ashtabula	H. D. Clarke, Jefferson.
Athens	Alex. Root, Athens.
Auglaize	J. H. Hencke, Wapakoneta.
Belmont	Geo. M. Pogue, St. Clairsville.
Brown	E. V. Stephan, Georgetown.
Butler	John Schwarz, Hamilton.
Carroll	G. E. Bell, Carrollton.
Champaign	J. C. Neer, Urbana.
Clark	J. M. Collins, Springfield.
Clermont	H. C. Aultman, Batavia.
Clinton	H. W. Hodson.
Columbiana	John W. Moore, Lisbon.
Coshocton	L. C. Shaw, Coshocton.
Crawford	F. G. Bittikofer, Bucyrus.
Cuyahoga	A. G. Yawberg, Cleveland.
Darke	C. A. Wilt, Greenville.
Defiance	W. W. Heater, Defiance.
Delaware	Paul M. Lybarger, Delaware.
Erie	I. S. Winner, Sandusky.
Fairfield	C. C. Miller, Lancaster.
Fayette	O. S. Nelson, Washington Court House.
Franklin	Wm. S. Coy, Columbus.
Fulton	C. D. Perry, Wauseon.
Gallia	Wayne Lutz, Gallipolis.
Geauga	Harold Ryder, Chardon.
Greene	F. M. Reynolds, Xenia.
Guernsey	W. G. Wolfe, Cambridge.
Hamilton	Pliny A. Johnston, Cincinnati.
Hancock	A. J. Nowlan, Findlay.
Hardin	F. P. Allyn, Kenton.
Harrison	G. E. Roche, Cadiz.
Henry	W. T. Hatcher, Napoleon.
Highland	W. H. Vance, Hillsboro.
Hocking	W. C. Brashares, Logan.
Holmes	F. H. Close, Millersburg.
Huron	O. C. Minnich, Norwalk.
Jackson	M. A. Henson, Jackson.
Jefferson	W. I. Everson, Steubenville.
Knox	J. C. Marriott, Mount Vernon.
Lake	F. H. Kendall, Painesville.
Lawrence	L. C. Martin, Ironton.
Licking	N. D. O. Wilson, Newark.
Logan	E. [illegible]. Bell, Bellefontaine.
Lorain	W. A. Hiscox, Elyria.
Lucas	J. W. Whitmer, Toledo.
Madison	L. C. Dick, London.
Mahoning	Jerome Hull, Youngstown.
Marion	W. R. Heistand, Marion.
Medina	R. W. Pierce, Medina.
Meigs	G. H. Crow, Pomeroy.
Mercer	S. Cotterman, Celina.
Miami	L. J. Bennett, Troy.
Monroe	E. C. Feiock, Woodsfield.
Montgomery	A. A. Maysilles, Dayton.
Morgan	Clarence G. Johnson, McConnellsville.

—County and Other Local Superintendents of Schools—Continued.

unty.	County superintendent.
ontinued.	
	C. C. Crawford, Mount Gilead.
um	John S. McGinnis, Zanesville.
	H. L. Bates, Caldwell.
	A. O. Dehn, Port Clinton.
g	John C. Berg, Paulding.
	D. E. Riggle, New Lexington.
y	M. C. Warren, Circleville.
	J. D. McKinley, Waverly.
	E. O. Pore, Ravenna.
	W. S. Fogarty, Eaton.
	G. J. Keinath, Ottawa.
d	E. W. Bell, Mansfield.
	A. W. Whetstone, Chillicothe.
y	S. A. Harbourt, Fremont.
	Edw. McCowen, Portsmouth.
	J. E. Sherck, Tiffin.
	W. E. Partington, Sidney.
	J. J. Armstrong, Canton.
	C. A. Flickinger, Akron.
ll	J. E. Boetticher, Warren.
was	Chas. Barthelmeh, New Philadelphia.
	D. H. Sellers, Marysville.
rt	J. A. Greu[illegible]ch, Van Wert.
	C. H. Copeland, McArthur.
	F. B. Harris, Lebanon.
ton	M. C. Smith, Marietta.
	G. U. Baumgardner. Wooster.
s	W. A. Salter, Bryan.
	H. E. Hall, Bowling Green.
t	James H. Grove, Upper Sandusky.
AHOMA.	
	W. W. Kimbrough, Stilwell.
	Charles C. Wolfe, Cherokee.
	J. B. Earle, Atoka.
	Granville T. Ayres, Beaver.
n	D. P. Lowe, Sayre.
	Mrs. Lloyd C. Smith, Watonga.
	R. K. McIntosh, Durant.
	C. W. Rasure, Anadarko.
a	John L. Rice, El Reno.
	G. W. Coffman, Ardmore.
e	J. Norwood Peterson, Tahlequah.
	J. T. Reed, Hugo.
n	Mrs. Zilpha French, Boise City.
d	W. R. Clark, Norman.
	J. M. Cusenberry, Coalgate.
ne	J. A. Johnson, Lawton.
	J. Whitt Johnson, Walter.
	Tom W. Smith, Vinita.
	Helen Fitchel, Sapulpa.
	Fred E. La Rue, Arapaho.
e	Clark Bell, Jay.
	Gertrude Thomas, Taloga.
	Mrs. L. M. Lee, Arnett.
	Jas. W. Tyler, Enid.
	W. Cromwell, Pauls Valley.
	M. H. Shepard, Chickasha.
	John W. Williams, Medford.
	M. C. Butler, Mangum.
	Harry C. Hicks, Hollis.
	W. D. Drake, Buffalo.
	J. J. Powell, Stigler.
	V. H. Durham, Holdenville.
	W. T. Clark, Altus.
	J. M. Dyer, Waurika.
n	W. W. Van Noy, Tishomingo.
	A. D. Kersey, Newkirk.
er	Mrs. Sara Liston, Kingfisher.
	J. B. Hendrix, Hobart.
	Carrie Chandler, Wilburton.
	J. Arthur Skinner, Poteau.
	O. W. Bass, Chandler.
	Margaret Doolittle, Guthrie.
County.	County superintendent.
OKLAHOMA—contd.	
Love	Martha Daves. Marietta.
McClain	Beatrice Ward. Purcell.
McCurtain	L. N. Gray, Idabell.
McIntosh	R. J. Mullins, Eufaula.
Major	Louesa Specht, Fairview.
Marshall	J. R. McClendon, Madill.
Mayes	Carlotta Archer, Pryor.
Murray	Nola R. Hill, Sulphur.
Muskogee	W. A. Battles, Muskogee.
Noble	Geo. F. Dennis, Perry.
Nowata	E. R. Bell, Nowata.
Okfuskee	Geo. F. Durham, Okemah.
Oklahoma	Mrs. Anna Burks-Love, Oklahoma.
Okmulgee	R. G. Creekmore, Okmulgee.
Osage	John N. Porter, Pawhuska.
Ottawa	J. M. Rowley, Miami.
Pawnee	Leo B. Smith, Pawnee.
Payne	John R. Heisser, Stillwater.
Pittsburg	T. T. Lewis, McAlester.
Pontotoc	A. Floyd, Ada.
Pottawatomie	H. M. Fowler, Tecumseh.
Pushmataha	W. C. Payne, Antlers.
Roger Mills	W. A. Adams, Cheyenne.
Rogers	A. K. Ross, Claremore.
Seminole	W. A. Billingsley, Wewoka.
Sequoyah	Fred Mershon, Sallisaw.
Stephens	J. A. Carnes, Duncan.
Texas	F. P. Stultz, Guymon.
Tilman	T. O. Davis, Frederick.
Tulsa	Mrs. Minette Hedges, Tulsa.
Wagoner	Mrs. Fern H. Sizer, Wagoner.
Washington	Helen L. Dunaway, Bartlesville.
Washita	Albert Eaton, Cordell.
Woods	C. J. Godfrey, Alva.
Woodward	W. L. Pittman Woodward.
OREGON.	
Baker	Elmetta Bailey, Baker.
Benton	R. E. Cannon, Corvallis.
Clackamas	J. E. Calavan, Oregon City.
Clatsop	O. H. Byland, Astoria.
Columbia	J. W. Allen, St. Helens.
Coos	R. E. Baker, Coquille.
Crook	J. E. Myers, Prineville.
Curry	W. M. Kent, Gold Beach.
Deschutes	J. Alton Thompson, Bend.
Douglas	O. C. Brown, Roseburg.
Gilliam	J. C. Sturgill, Condon.
Grant	W. W. Austen, Hamilton.
Harney	Mrs. Frances Clark, Burns.
Hood River	L. B. Gibson, Hood River.
Jackson	G. W. Ager, Jacksonville.
Jefferson	Mrs. Lillian Watts, Madras.
Josephine	Mrs. Alice M. Bacon, Grants Pass.
Klamath	Edna I. Wells, Klamath Falls.
Lake	C. E. Oliver, Lakeview.
Lane	E. J. Moore, Eugene.
Lincoln	R. P. Goin, Toledo.
Linn	Mrs. Ida M. Cummings, Albany.
Malheur	Fay Clark, Vale.
Marion	W. M. Smith, Salem.
Morrow	Mrs. Lena S. Shurte, Heppner
Multnomah	W. C. Alderson, Portland.
Polk	Fred S. Crowley, Dallas.
Sherman	F. E. Fagan, Moro.
Tillamook	G. B. Lamb, Tillamook.
Umatilla	W. W. Green, Pendelton.
Union	Mrs. A. E. Ivanhoe, La Grande
Wallowa	J. C. Conley, Enterprise.
Wasco	C. T. Bonney, The Dalles.
Washington	N. A. Frost, Hillsboro.
Wheeler	H. J. Simmons, Fossil.
Yamhill	S. S. Duncan, McMinnville.

XII.—COUNTY AND OTHER LOCAL SUPERINTENDENTS OF SCHOOLS—Continued.

County.	County superintendent.
PENNSYLVANIA.	
Adams	H. Milton Roth, Gettysburg.
Allegheny	Saml. Hamilton, Wilkinsburg.
Armstrong	C. M. Heilman, Kittanning.
Beaver	David C. Locke, Beaver.
Bedford	Lloyd H. Hinkle, Bedford.
Berks	E. M. Rapp, Reading.
Blair	T. S. Davis, Altoona.
Bradford	L. J. Russell, Towanda.
Bucks	J. H. Hoffman, Doylestown.
Butler	F. A. McClung, Butler.
Cambria	M. S. Bentz, Ebensburg.
Cameron	C. E. Plasterer, Emporium.
Carbon	J. J. Bevan, Mauch Chunk.
Center	D. O. Etters, State College.
Chester	Thomas A. Bock, Westchester.
Clarion	N. E. Heeter, Clarion.
Clearfield	Cyrus A. Weisgerber, Clearfield.
Clinton	I. N. McCloskey, Lock Haven
Columbia	Wm. W. Evans, Bloomsburg
Crawford	P. D. Blair, Meadville.
Cumberland	J. Kelso Green, Carlisle.
Dauphin	Frank E. Shambaugh, Lykens.
Delaware	A. G. C. Smith, Media.
Elk	J. W. Sweeney, St. Marys.
Erie	I. H. Russell, North East.
Fayette	John S. Carroll, Uniontown.
Forest	J. O. Carson, Tionesta.
Franklin	L. E. Smith, Chambersburg.
Fulton	J. Emery Thomas, McConnellsburg.
Greene	H. D. Freeland, Waynesburg.
Huntingdon	L. E. Boyer, Huntingdon.
Indiana	J. F. Chapman, Indiana.
Jefferson	Charles A. Anderson, Brookville.
Juniata	C. E. Kauffman, McAlisterville.
PENNSYLVANIA—continued.	
Lackawanna	J. C. Taylor, Scranton.
Lancaster	Daniel Fleisher, Lancaster.
Lawrence	Charles F. Ball, Mahoningtown, R. 8.
Lebanon	John W. Snoke, Lebanon.
Lehigh	Mervin J. Wertman, Orefield.
Luzerne	F. P. Hopper, Wilkes-Barre.
Lycoming	G. B. Milnor, Muncy.
McKean	C. W. Lillibridge, Smethport.
Mercer	H. E. McConnell, Mercer.
Mifflin	Lawrence Ruble, McVeytown.
Monroe	Frank Koehler, Stroudsburg.
Montgomery	J. H. Landis, Norristown.
Montour	Fred W. Diehl, Danville.
Northampton	Geo. A. Grim, Nazareth.
Northumberland	I. H. Mauser, Sunbury.
Perry	D. A. Kline, New Bloomfield.
Pike	L. Westbrook, Matamoras.
Potter	A. P. Akeley, Coudersport.
Schuylkill	L. Seltzer, Pottsville.
Snyder	T. A. Stetler, Middleburg.
Somerset	John H. Fike., Somerset.
Sullivan	Harry R. Henning, Lopez.
Susquehanna	F. H. Taylor, Montrose.
Tioga	Morton F. Jones, Blossburg.
Union	Wm. W. Spigelmyer, Mifflinburg.
Venango	D. W. Armstrong, Franklin.
Warren	C. S. Knapp, Warren.
Washington	L. R. Crumrine, Washington.
Wayne	J. J. Koehler, Honesdale.
Westmoreland	Robt. C. Shaw, Greensburg.
Wyoming	John E. Morgan, Tunkhannock.
York	C. W. Stine, York.

Division.	Division superintendent.
PHILIPPINE ISLANDS.	
Albay	Thomas H. Cassidy, Albay.
Antique	Candido Alcazar (acting), San Jose.
Bataan	Benito Pangilinan (acting), Balanga.
Batangas	H. M. Wagenblass, Batangas.
Bohol	O. H. Charles, Tagbilaran.
Bulacan	R. L. Barron, Malolos.
Cagayan	W. B. Beard, Tuguegarao.
Camarines	Benjamin Levin, Naga.
Capiz	F. E. Hemenway, Capiz.
Cavite	William S. Fickes, Cavite.
Cebu	S. J. Wright, Cebu.
Ilocos Norte	John M. Roberts (acting), Laoag.
Ilocos Sur	Edward J. Murphy, Vigan.
Iloilo	James C. Scott, Iloilo.
Isabela	Alexander M. Wiley (acting), Ilagan.
Laguna	R. G. McLeod, Santa Cruz.
Leyte	S. Colin Campbell (acting), Tacloban.
Manila	H. A. Bordner, Manila.
Mindoro	Leodegario Victorino (acting), Calapan.
Misamis	Artie A. House (acting), Cagayan.
Mountain	C. Skattebol, Baguio.
Nueva Ecija	L. P. Willis (acting), Cabanatuan.
Nueva Vizcaya	Daniel E. Clancy (acting), Bayombong.
Occidental Negros	Ralph H. Worsley (acting), Bacolod.
PHILIPPINE ISLANDS—con.	
Oriental Negros	John C. Early (acting), Dumaguete.
Palawan	S. C. Kelleher (acting), Cuyo.
Pampanga	Roy K. Gilmore, San Fernando.
Pangasinan	A. W. Cain, Lingayen.
Rizal	F. J. Waters, Pasig.
Romblon	Q. San Buenaventura (acting), Romblon.
Samar	B. Fielden Nutter (acting), Catbalogan.
Sorsogon	G. W. Satterthwaite, Sorsogon.
Surigao	Walter G. M. Buckisch (acting), Surigao.
Tarlac	Adam C. Derkum, Tarlac.
Tayabas	Gilbert S. Perez (acting), Lucena.
Union	Honorio Poblador, San Fernando.
Zambales	Antonio Nera (acting), Iba.
Department of Mindanao and Sulu.	
Agusan	Charles S. Crowther (acting), Butuan.
Bukidnon	George C. Kindley (acting), Malaybalay.
Cotabato	Arthur E. Harpst, Cotabato.
Davao	Henry C. Stanton (acting), Davao.
Lanao	John J. Heffington, Dansalan.
Sulu	J. W. Light, Jolo.
Zamboanga	Lloyd G. Kirby (acting), Zamboanga.

XII.—County and Other Local Superintendents of Schools—Continued.

Division.	Division superintendent.	Division.	Division superintendenut.
PORTO RICO.		PORTO RICO—con.	
Adjuntas	Luis A. Padilla.	Isabela	Carlos Rivera Ufret.
Aguadilla	Santiago Veve, jr.	Juana Diaz	Charles J. Kelley.
Aibonito	Don W. Snow.	Juncos	Celestino Benitez.
Anasco	R. H. Spicer.	Lares	R. A. Segarra.
Arecibo	Manuel G. Nin.	Manati	Joseph C. Morin.
Arroyo	Ismael Maldonado.	Maricao	Pedro P. Aran.
Barros		Mayaguez	R. B. Barlow.
Bayamon	Manuel Negron Collazo.	Naguabo	Valeriano Flores y Robles.
Cabo Rojo	William F. Littlefield.	Ponce	John P. Blanco.
Caguas	Gerardo Selles y Sola.	Rio Grande	Samuel D. W. Mills.
Camuy	Juliet A. Casey.	Rio Piedras	Cecil E. Stevens.
Carolina	Beatriz Lassalle.	Salinas	Juan E. Castillo.
Cayey	Alan H. Linch.	San German	Judson U. McGuire.
Ciales		San Juan	George V. Keelan.
Coamo	Harold S. Corlett.	San Sebastian	Herminio Rodriguez.
Comerio	Oscar Porrata, jr.	Toa Baja	Jose B. Fontanes.
Corozal	Francisco Gaztambide.	Utuado	Jose C. Rosario.
Fajardo	Servando Rabainne.	Vega Baja	Victor M. Suarez.
Guayama	Cecilio Torres Reyes.	Yabucoa	Bernardo Huyke.
Guayanilla	Hatuey Diaz Baldorioty.	Yauco	Charles E. Miner.
Humacao	Marshall D. Rice.		

Town.	Town superintendent.	Town.	Town superintendent.
RHODE ISLAND.[1]		RHODE ISLAND—continued.	
Charlestown	S. Hussey Reed, Westerly.		
Exeter	George E. Money, Liberty.	Middletown	Joel Peckham, Aquidneck.
Foster	Clovis H. Mitchell, North Scituate.	Narragansett	William A. Brady, Narragansett Pier.
Glocester	Irving C. Mitchell, Greenville.	New Shoreham	Walter E. Young, Block Island.
Jamestown	Clovis H. Mitchell, North Scituate.	Richmond	Charles J. Greene, Kenyon.
Little Compton	J. Webster Coombs, Little Compton.	West Greenwich	Joseph Rose, Washington.

County.	County superintendent.	Couuty.	County superintendent.
SOUTH CAROLINA.		SOUTH CAROLINA—continued.	
Abbeville	W. J. Evans, Abbeville.		
Aiken	H. R. Chapman, Aiken.	Marion	S. J. Wall, Marion.
Anderson	J. B. Felton, Anderson.	Marlboro	A. L. Easterling, Bennettsville.
Bamberg	R. W. D. Rowell, Bamberg.		
Barnwell	H. J. Crouch, Barnwell.	Newberry	C. M. Wilson, Newberry.
Beaufort	W. M. Steinmeyer, Beaufort.	Oconee	Thomas A. Smith, Walhalla.
Berkeley	I. B. Marshe, Moncks Corner.	Orangeburg	L. W. Livingston, Orangeburg.
Calhoun	B. F. Keller, St. Matthews.		
Charleston	H. H. McCarley, Charleston.	Pickens	R. T. Hallum, Pickens.
Cherokee	W. C. McArthur, Gaffney.	Richland	O. D. Seay, Columbia.
Chester	W. D. Knox, Chester.	Saluda	F. O. Black, Saluda.
Chesterfield	J. A. Knight, Chesterfield.	Spartanburg	B. S. Haynes, Spartanburg.
Clarendon	E. J. Browne, Manning.	Sumter	J. H. Haynesworth, Sumter.
Colleton	H. S. Strickland, Walterboro.	Union	Jas. H. Hope, Union.
Darlington	D. L. Lewis, Darlington.	Williamsburg	N. D. Lesesne
Dillon	R. S. Rogers, Dillon.	York	J. E. Carroll, York.
Dorchester	J. A. Parler, St. George.		
Edgefield	W. W. Fuller, Edgefield.	SOUTH DAKOTA.	
Fairfield	W. W. Turner, Winnsboro.		
Florence	A. H. Gasque, Florence.	Aurora	Elva Howey, Plankinton.
Georgetown	J. W. Doar, Georgetown.	Beadle	Hortense Babbitt, Huron.
Greenville	M. C. Barton, Greenville.	Bennett	Clara Parlasca, Martin.
Greenwood	T. E. Dorn, Greenwood.	Bon Homme	J. W. Whiting, Tyndall.
Hampton	J. W. Rouse, Hampton.	Brookings	Herbert Blakely, Brookings.
Horry	M. J. Bullock, Conway.	Brown	R. N. Axford, Aberdeen.
Jasper	S. B. Owens, Ridgeland.	Brule	Evalena Rossman, Chamberlain.
Kershaw	I. J. McKenzie, Camden.		
Lancaster	V. A. Lingle, Lancaster.	Buffalo	Julia Hart, Gann Valley.
Laurens	J. H. Sullivan, Laurens.	Butte	Mae Scotney, Bellefourche.
Lee	J. T. Munnerlyn, Bishopville.	Campbell	W. A. Bentley, Mound City.
Lexington	A. D. Martin, Lexington.	Charles Mix	Ruth E. Sabin, Lake Andes.
McCormick	T. J. Price, McCormick.	Clark	Katie Sprague, Clark.

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[1] See also p. 87.

XII.—COUNTY AND OTHER LOCAL SUPERINTENDENTS OF SCHOOLS—Continued.

County.	County superintendent.
SOUTH DAKOTA—continued.	
Clay	F. Belle Conrow, Vermilion.
Codington	Sara Reeve, Watertown.
Corson	Frances Delaney, McIntosh.
Custer	Ethel Montgomery, Custer.
Davison	Emma McClintock, Mitchell.
Day	Ira Howell, Webster.
Deuel	A. W. Munson, Clear Lake.
Dewey	J. A. G. Smith, Timber Lake.
Douglas	Geo. E. Sanders, Armour.
Edmunds	Lillian Theil, Ipswich.
Fall River	Helen Brelsford, Hot Springs.
Faulk	Mrs. Susie P. Swartout, Faulkton.
Grant	Sidney Barrielow, Milbank.
Gregory	K. H. Cressman, Burke.
Haakon	Jennie O'Neal, Philip.
Hamlin	Elliott A. Parker, Hayti.
Hand	Jessie Moncur, Miller.
Hanson	Jessie Robertson, Alexandria.
Harding	Minnie E. Stegner, Buffalo.
Hughes	Daisy Solberg, Pierre.
Hutchinson	Benj. Kaufmann, Freeman.
Hyde	Pauline D. Gray, Highmore.
Jackson	L. S. Du Bois, Kadoka.
Jerauld	Ruby C. Bromwell, Wessington Springs.
Jones	L. M. Powers, Murdo.
Kingsbury	A. A. Coulson, De Smet.
Lake	Alice Rippe, Madison.
Lawrence	Nellie Warren, Deadwood.
Lincoln	H. M. Dale, Canton.
Lyman	Ben Bower, Oacoma.
McCook	Laura Bouchie, Salem.
McPherson	W. K. Bishop, Leola.
Marshall	Jessie Stewart, Britton.
Meade	Harry L. Smith, Sturgis.
Mellette	T. H. Greene, White River.
Miner	Edmund Steele, Howard.
Minnehaha	Mrs. Anna M. Eddy, Sioux Falls.
Moody	Alice Coonrod, Flandreau.
Pennington	Adella S. Beach, Rapid City.
Perkins	A. A. Hale, Bison.
Potter	Margaret Briscoe, Gettysburg.
Roberts	J. W. Thomas, Sisseton.
Sanborn	A. J. Smalley, Woonsocket.
Spink	E. H. Kahl, Redfield.
Stanley	Roberta Smith, Fort Pierre.
Sully	Jesse T. Hayes, Onida.
Tripp	Mrs. Sadie Brownlow, Winner.
Turner	Nellie I. Appleby, Parker.
Union	Alice A. Tollefson, Elk Point.
Walworth	E. H. Noteboom, Selby.
Yankton	Geo. A. Clark, Yankton.
Ziebach	Walter R. Menzel, Dupree.
TENNESSEE.	
Anderson	W. H. Miller, Clinton.
Bedford	Louis Wilhoite, Shelbyville.
Benton	E. J. Clement, Camden.
Bledsoe	John M. Gerren, Pikeville.
Blount	Nancy Lee Broady, Maryville.
Bradley	S. Y. Adcock, Cleveland.
Campbell	Joe Jennings, Jacksboro.
Cannon	W. H. Finley, Woodbury.
Carroll	D. T. Barnhill, Huntingdon.
Carter	J. R. Ritchie, Elizabethton.
Cheatham	P. H. Duke, Ashland City.
Chester	N. B. Hardeman, Henderson.
Claiborne	N. Otto Irwin, Tazewell.
Clay	R. C. Ledbetter, Willow Grove.
Cocke	O. L. McMahan, Newport.
Coffee	J. H. Leming, Manchester.
Crockett	T. E. Lowery, Alamo.
Cumberland	J. S. Cline, Crossville.
Davidson	W. C. Dodson, Nashville.
Decatur	Geo. L. Wortham, Decaturville.
TENNESSEE—con.	
Dekalb	Emmons Givan, Liberty.
Dickson	R. E. Corlew, Charlotte.
Dyer	R. M. Grills, Dyersburg.
Fayette	W. T. Loggins, Somerville.
Fentress	W. R. Storie, Jamestown.
Franklin	W. J. Arnold, Winchester.
Gibson	J. B. Cummings, Trenton.
Giles	B. H. Gaultney, Pulaski.
Grainger	H. G. Farmer, Rutledge.
Greene	Joel N. Pierce, Greeneville.
Grundy	J. L. Rollins, Altamont.
Hamblen	W. S. Ivy, Morristown.
Hamilton	J. W. Abel, Chattanooga.
Hancock	George Jaynes, Sneedville.
Hardeman	J. D. Turner, Bolivar.
Hardin	J. C. Smith, Saltillo.
Hawkins	Roy Myers, Rogersville.
Haywood	F. R. Ogilvie, Brownsville.
Henderson	O. E. Holmes, Lexington.
Henry	Joe Routon, Paris.
Hickman	Herman Pratt, Centreville.
Houston	D. J. McAulay, Erin.
Humphreys	W. H. Knight, Waverly.
Jackson	W. L. Dixon, Gainesboro.
James	W. H. Roark, Ooltewah.
Jefferson	R. C. McAndrews, Dandridge.
Johnson	J. L. Shoun, Mountain City.
Knox	W. L. Stookesbury, Knoxville.
Lake	Thurman McCain, Tiptonville.
Lauderdale	G. G. McLeod, Ripley.
Lawrence	Napoleon Lumpkin, Lawrenceburg.
Lewis	Mrs. H. T. Poore, Hohenwald.
Lincoln	Jesse Hardin, Fayetteville.
London	J. T. Henderson, Loudon.
McMinn	Austin Hanks, Athens.
McNairy	A. H. Grantham, Bethel Springs.
Macon	O. G. Davis, Lafayette.
Madison	W. A. Malone, Jackson.
Marion	D. A. Tate, South Pittsburg.
Marshall	J. G. Stinson, Lewisburg.
Maury	Jno. P. Graham, Culleoka.
Meigs	J. H. Bennett, Decatur.
Monroe	A. C. Watson, Madisonville.
Montgomery	A. W. Jobe, Clarksville.
Moore	Cora Wiseman, Lynchburg.
Morgan	E. R. Williams, Wartburg.
Obion	B. A. Vaughn, Union City.
Overton	Geo. O. Lea, Livingston.
Perry	R. H. Gray, Beardstown.
Pickett	W. J. Babb, Byrdstown.
Polk	W. B. Rucker, Benton.
Putnam	J. M. Hatfield, Cookeville.
Rhea	Wm. Hilleary, Dayton.
Roane	D. S. Tanner, Kingston.
Robertson	O. H. Bernard, Springfield.
Rutherford	W. N. Elrod, Murfreesboro.
Scott	W. W. Walker, Huntsville.
Sequatchie	W. V. Freiley, Dunlap.
Sevier	A. O. De Lozier, Sevierville.
Shelby	Miss Charl Williams, Memphis.
Smith	Lee Huffines, Carthage.
Stewart	W. C. Howell, Dover.
Sullivan	J. C. Akard, Blountville.
Sumner	T. W. Hunter, Gallatin.
Tipton	H. H. Robison, Covington.
Trousdale	T. B. Woodmore, Hartsville.
Unicoi	Lizzie Roberts, Erwin.
Union	V. W. Palmer, Sharps Chapel.
Van Buren	H. E. Scott, Spencer.
Warren	E. B. Etter, McMinnville.
Washington	J. C. Berry, Jonesboro.
Wayne	Jno. W. Gallien, Waynesboro.
Weakley	F. Y. Fuqua, Dresden.
White	J. W. McPeak, Sparta.
Williamson	Fred J. Page, Franklin.
Wilson	B. Y. Neal, Watertown.

XII.—County and Other Local Superintendents of Schools—Continued.

County.	County superintendent.
TEXAS.	
Anderson	E. F. Rollins, Palestine.
Andrews	A. N. Brown, Andrews.
Angelina	J. O. Satternwhite, Lufkin.
Aransas	F. Stevens, Rockport.
Archer	J. S. Melugin, Archer City.
Armstrong	H. L. Mobley, Claude.
Atascosa	H. D. Rhode, Jourdanton.
Austin	O. M. Brown, jr., Bellville.
Bailey	B. D. Woodlee, Dimmitt.
Bandera	Sam O'Bryant, Bandera.
Bastrop	Nat G. Mitchell, Bastrop.
Baylor	T. J. North, Seymour.
Bee	Patti Reagan, Beeville.
Bell	P. L. Stone, Belton.
Bexar	P. F. Stewart, San Antonio.
Blanco	Wm. Martiny, Johnson City.
Borden	C. E. Reeder, Gail.
Bosque	H. C. Powell, Meridian.
Bowie	C. A. Bonham, Boston.
Brazoria	R. R. Sebring, Angleton.
Brazos	W. L. Powers, Bryan.
Brewster	A. M. Turney, Alpine.
Briscoe	C. B. Richards, Silverton.
Brooks	J. A. Brooks, Falfurrias.
Brown	R. A. McLesky, Brownwood.
Burleson	T. A. Schoppe, Caldwell.
Burnet	J. R. Smith, Burnet.
Caldwell	John N. Gambrell, jr., Lockhart.
Calhoun	F. M. Dudgeon, Port Lavaca.
Callahan	S. E. Settle, Baird.
Cameron	W. F. Jourdan, Brownsville.
Camp	W. N. Tucker, Pittsburg.
Carson	A. Callaghan, Panhandle.
Cass	R. H. Harvey, Linden.
Castro	B. D. Woodlee, Dimmitt.
Chambers	W. B. Gordon, Anahuac.
Cherokee	H. T. Brown, Rusk.
Childress	O. V. Vernon, Childress.
Clay	J. R. Carter, Henrietta.
Cochran	Roscoe Wilson.
Coke	D. I. Durham, Robert Lee.
Coleman	J. C. Griffen, Coleman.
Collin	W. S. Smith, McKinney.
Collingsworth	A. C. Nicholson, Wellington.
Colorado	B. H. Meinert, Columbus.
Comal	Adolf Stein, New Braunfels.
Comanche	Mrs. J. E. Deely, Comanche.
Concho	Jas. E. Howze, Paint Rock.
Cooke	F. J. Clement, Gainesville.
Coryell	J. C. McKelvy, Gatesville.
Cottle	W. O. Jones, Paducah.
Crockett	C. E. Davidson, Ozona.
Crosby	Pink L. Parrish, Crosbyton.
Culberson	J. C. Hunter, Van Horn.
Dallam	Lawrence Ashby, Dalhart.
Dallas	B. M. Hudspeth, Dallas.
Dawson	J. E. Garland, Lamesa.
Deaf Smith	J. A. Hughes, Hereford.
Delta	W. B. Wheeler, Cooper.
Denton	L. H. Edwards, Denton.
De Witt	L. G. Covey, Cuero.
Dickens	Walter L. Powell, Dickens.
Dimmit	J. O. Rouse, Carrizo Springs.
Donley	J. H. O'Neall, Clarendon.
Duval	J. F. Clarkson, San Diego.
Eastland	R. E. Sikes, Eastland.
Ector	E. V. Graham, Odessa.
Edwards	A. P. Allison, Rock Springs.
Ellis	W. S. Ely, Waxahachie.
El Paso	Myra Winkler, El Paso.
Erath	Maud Cunningham, Stephensville.
Falls	G. A. Pringle, Marlin.
Fannin	Frank Young, Bonham.
Fayette	G. A. Stierling, La Grange.
Fisher	W. C. Martin, Roby.
Floyd	W. B. Clark, Floydada.
Foard	G. L. Burk, Crowell.
Fort Bend	Herman Beyer, Richmond.
TEXAS—continued.	
Franklin	O. L. Reaves, Mount Vernon.
Freestone	Carl Williford, Fairfield.
Frio	A. J. Cook, Pearsall.
Gaines	T. O. Stark, Seminole.
Galveston	T. B. Blackstone, Galveston.
Garza	A. H. Anderson, Post City.
Gillespie	A. H. Kneese, Fredericksburg.
Glasscock	C. W. Cunningham, Garden City.
Goliad	G. M. Jones, Goliad.
Gonzales	J. C. Cochran, Gonzales.
Gray	T. M. Wolfe, Lefors.
Grayson	J. A. Giles, Sherman.
Gregg	Walter E. Jones, Longview.
Grimes	M. A. McDonald, Anderson.
Guadalupe	J. F. Saegert, Seguin.
Hale	Charles Clement, Plainview.
Hall	M. E. McNaly, Memphis.
Hamilton	A. T. Jones, Hamilton.
Hansford	B. V. Andrews, Hansford.
Hardeman	L. M. Davis, Quanah.
Hardin	R. P. Gibbs, Kountze.
Harris	L. L. Pugh, Houston.
Harrison	C. W. LaGrone, Marshall.
Hartley	J. H. Phillips, Channing.
Haskell	J. R. Hutto, Haskell.
Hays	John H. Saunders, San Marcos.
Hemphill	J. L. Jennings, Canadian.
Henderson	W. R. Thomas, Athens.
Hidalgo	J. S. Bunn, Edinburg.
Hill	Mrs. Leon Culberson, Hillsboro.
Hockley	Roscoe Wilson, Lubbock.
Hood	T. H. Hines, Granbury.
Hopkins	Dan J. Thompson, Sulphur Springs.
Houston	Jno. N. Snell, Crockett.
Howard	S. E. Penix, Big Springs.
Hunt	E. P. Thomas, Greenville.
Hutchinson	C. Travis, Plemons.
Irion	W. F. Fikes, Sherwood.
Jack	J. W. Fulcher, Jacksboro.
Jackson	W. W. McCrary, Edna.
Jasper	B. T. Withers, Jasper.
Jeff Davis	W. J. Ward, Fort Davis.
Jefferson	Homer C. Daniel, Beaumont.
Jim Hogg	A. M. Brumfield, Hebbronville.
Jim Wells	T. L. Barnhouse, Alice.
Johnson	G. S. Tomas, Cleburne.
Jones	C. L. Prichard, Anson.
Karnes	L. P. Lightsey, Karnes City.
Kaufman	Florence Conner, Kaufman.
Kendall	J. W. Lawhon, Boerne.
Kent	B. P. Yardiman, Clairemont.
Kerr	Lee Wallace, Kerrville.
Kimble	J. B. Randolph, Junction City.
King	J. F. Witherspoon, Guthrie.
Kinney	Joseph Veltman, Brackettville.
Kleburg	Ben. F. Wilson, Kingsville.
Knox	J. M. Morgan, Benjamin.
Lamar	J. A. Fulks, Paris.
Lamb	L. E. Ensign, Olton.
Lampasas	J. F. Higgins, Lampasas.
La Salle	G. A. Welhausen, Cotulla.
Lavaca	William Eilers, Hallettsville.
Lee	C. M. Bishop, Giddings.
Leon	W. R. Moore, Centerville.
Liberty	P. S. Newberry, Liberty.
Limestone	T. L. Pritchard, Groesbeck.
Lipscomb	W. H. Sewell, Lipscomb.
Live Oak	W. W. Caves, Oakville.
Llano	Ernest Moore, Llano.
Loving	Howell Johnson, Pecos.
Lubbock	Roscoe Wilson, Lubbock.
Lynn	C. H. Cain, Tahoka.
McCulloch	W. M. Deans, Brady.
McLennan	R. L. Abbott, Waco.

XII.—COUNTY AND OTHER LOCAL SUPERINTENDENTS OF SCHOOLS—Continued.

County.	County superintendent.
TEXAS—continued.	
McMullen	D. B. Martin, Tilden.
Madison	J. T. Cony, Madisonville.
Marion	Alice Emmert, Jefferson.
Martin	A. G. Odam, Stanton.
Mason	Glenn W. Smith, Mason.
Matagorda	W. F. Pack, Bay City.
Maverick	Ben V. King, Eagle Pass.
Medina	W. N. Saathoff, Hondo.
Menard	J. D. Scruggs, Menard.
Midland	J. M. De Armond, Midland.
Milam	J. F. Chadwick, Cameron.
Mills	R. B. Weaver, Goldthwaite.
Mitchell	J. H. Bullock, Colorado.
Montague	I. B. Williams, Montague.
Montgomery	Bessie Smith Meredith, Conroe.
Moore	J. W. Fox, Dumas.
Morris	G. E. Shive, Daingerfield.
Motley	A. B. Crane, Matador.
Nacogdoches	G. B. Layton, Nacogdoches.
Navarro	J. B. Davis, Corsicana.
Newton	J. B. Stripling, Newton.
Nolan	A. D. Ellis, Sweetwater.
Nueces	Nat Benton, Corpus Christi.
Ochiltree	R. T. Carrell, Ochiltree.
Oldham	Wm. Balfour, Tascosa.
Orange	Allie Bland, Orange.
Palo Pinto	E. L. Pitts, Palo Pinto.
Panola	R. E. Carswell, Carthage.
Parker	W. V. Shadle, Weatherford.
Parmer	James D. Hamlin, Farwell.
Pecos	Howell Johnson, Fort Stockton.
Polk	J. H. Taylor, Livingston.
Potter	W. C. Gee, Amarillo.
Presidio	W. M. Ellison, Marfa.
Rains	O. H. Rhodes, Emory.
Randall	A. R. Flesher, Canyon.
Reagan	W. W. Pittman, Stiles.
Real	D. D. Thompson, Leakey.
Red River	S. E. Clark, Clarksville.
Reeves	Jas. F. Ross, Pecos.
Refugio	Leslie Adkins, Refugio.
Roberts	J. E. Kinney, Miami.
Robertson	Clara Story, Franklin.
Rockwall	J. W. Reese, Rockwall.
Runnels	E. L. Hagan, Ballinger.
Rusk	G. C. Padgett, Henderson.
Sabine	Jno. Harper, Hemphill.
San Augustine	Willie E. Mathews, San Augustine.
San Jacinto	Wm McMurray, Cold Springs.
San Patricio	C. E. Wade, Sinton.
San Saba	Dor W. Brown, San Saba.
Schleicher	Geo M Brown, Eldorado.
Scurry	O. L. Howell, Snyder.
Shackelford	J. A. King, Albany.
Shelby	J. B. Hammer, Center.
Sherman	J. W. Elliott, Stratford.
Smith	E. J. Burns, Tyler.
Somervell	S. G. Tankersley, Glen Rose.
Starr	Sam P. Vale, Rio Grande City.
Stephens	Jesse R. Smith, Breckenridge.
Sterling	Jeff D. Ayres, Sterling City.
Stonewall	M. Sadie Abbott, Aspermont.
Sutton	E. S. Briant, Sonora.
Swisher	W. S. Tomlinson, Tulia.
Tarrant	G. T. Bludworth, Fort Worth.
Taylor	J. S. Smith, Abilene.
Terrell	T. R. Kuykendall, Sanderson.
Terry	W. W. Price, Brownfield.
Throckmorton	D. F. Reynolds, Throckmorton.
TEXAS—continued.	
Titus	Jno. Myers, Mount Pleasant.
Tom Green	C. E. Springstein, San Angelo.
Travis	Leon Halden, Austin.
Trinity	J. C. Ingram, Groveton.
Tyler	G. E. Neel, Woodville.
Upshur	B. B. Elder, Gilmer.
Upton	H. B. Griffith, Upland.
Uvalde	Julia Victor, Uvalde.
Valverde	Josephine Jones, Del Rio.
Van Zandt	C. H. Cox, Canton.
Victoria	G. M. Crutsinger, Victoria.
Walker	C. A. Bennick, Huntsville.
Waller	Alice Cameron, Hempstead.
Ward	Burch Carson, Barstow.
Washington	W. F. A. Boemer, Brenham.
Webb	B. Richardson, Laredo.
Wharton	J. R. Peale, Wharton.
Wheeler	L. D. Miller, Wheeler.
Wichita	E. C. Hall, Wichita Falls.
Wilbarger	L. A. Hallar, Vernon.
Willacy	J. S. Thornham, Sarita.
Williamson	Mrs. W. H. Hanna, Georgetown.
Wilson	J. E. Swift, Floresville.
Winkler	A. T. Crawford, Kermit.
Wise	Brandon Trussell, Decatur.
Wood	J. R. Clark, Quitman.
Yoakum	R. P. Moreland, Plains.
Young	D. K. Lyon, Graham.
Zapata	A. P. Spohn, Zapata.
Zavala	O. A. Stubbs, Batesville.
UTAH.	
Beaver	K. G. Maeser, Beaver.
Boxelder	C. H. Skidmore, Brigham City.
Cache	R. V. Larson, Logan.
Carbon	Orson Ryan, Price.
Davis	H. C. Burton, Farmington.
Duchesne	J. A. Washburn, Duchesne.
Emery	W. T. Reid, Orangeville.
Garfield	F. G. Gardiner, Panguitch.
Grand	D. S. L. McCorkle, Moab.
Iron	L. J. Nuttall, jr., Cedar City.
Juab:	
Juab dist	Ray Stewart, Nephi.
Tintic dist	I. L. Williamson, Eureka.
Kane	R. C. Merrill, Kanab.
Millard	R. E. Hammond, Fillmore.
Morgan	Wm. Abplanalp, Morgan.
Piute	D. H. Robinson, Junction.
Rich	G. N. Weston, Laketown.
Salt Lake:	
Granite dist	J. M. Mills, Salt Lake City.
Jordan dist	D. C. Jensen, Midvale.
San Juan	J. B. Harris, Grayson.
Sanpete:	
North dist	J. W. Anderson, Mt. Pleasant.
South dist	E. T. Reid, Manti.
Sevier	A. J. Ashman, Richfield.
Summit:	
North dist	W. H. Manning, Coalville.
South dist	Joseph Richards, Kamas.
Tooele	J. U. Hicks, Tooele.
Uintah	Earl Thompson, Vernal.
Utah:	
Alpine dist	J. H. Walker, Lehi.
Nebo dist	J. P. Creer, Spanish Fork.
Wasatch	D. A. Broadbent, Heber City.
Washington	W. O. Bentley, jr., St. George.
Wayne	Joseph Hickman, Loa.
Weber	W. N. Petterson, Ogden.

XII.—County and Other Local Superintendents of Schools—Continued.

Supervision district.	District superintendent.
VERMONT.[1]	
Addison County:	
Northwest district Addison, Ferrisburg, Monkton, Panton, Vergennes, Waltham.	H. A. Farrar, Vergennes.
Northeast district Bristol, Starksboro, Lincoln, New Haven.	C. R. Beeman, Bristol.
Central district Cornwall, Middlebury T., Middlebury I., Ripton, Weybridge, Salisbury.	Arthur W. Eddy, Middlebury.
Southwest district Shoreham, Bridport, Orwell, Benson.	E. L. Clark, Shoreham.
Bennington County:	
North district Dorset, Rupert, Pawlet.	Edward B. Hutchinson, North Bennington.
Central district Arlington, Shaftsbury, North Bennington I., Glastenbury, Sunderland, Manchester, Sandgate.	
Caledonia County:	
North district West Burke I., Burke T., Wheelock, Sheffield, Sutton, Newark, East Haven.	Garfield A. Jamieson, West Burke.
North central district Lyndonville I., Lyndon I., Lyndon T., Danville, Kirby.	Martin E. Daniels, Lyndonville.
South central district Barnet, Peacham, Walden, Waterford.	Harvey Burbank, East Barnet.
South district Wells River I., Newbury, Groton, Ryegate.	Leonard D. Smith, Wells River.
Chittenden County:	
Northwest district Milton I., Milton T., Westford, Fairfax, Georgia.	Charles O. Turner, Milton.
East district Richmond, Jericho, Underhill I., Underhill T., Bolton.	Horatio S. Read, Richmond.
Central district Essex Junction I., Essex T., Williston, Winooski I., Colchester.	Minnie E. Hays, Essex Junction.
South district Shelburne, Charlotte, South Burlington, St. George, Huntington, Hinesburg.	William G. Hartin, Burlington, R. D. No. 1.
Essex County:	
North district Canaan, Brighon, Norton, Lemington, Bloomfield, Brunswick.	B. E. Stover, North Stratford, N. H.
South district Lunenburg, Concord, Victory, Granby, Guildhall, Maidstone.	
VERMONT—continued.	
Franklin County:	
Northwest district Swanton, Highgate, St. Albans T.	Homer E. Hunt, Swanton.
Central district Enosburg Falls I., Enosburg T., Franklin, Sheldon.	Frederick W. Wallace, Enosburg Falls.
Northeast district Richford, Berkshire, Montgomery.	Edwin F. Greene, Richford.
Southeast district Bakersfield, Fairfield, Fletcher.	Sidney C. Harding, East Fairfield.
Grand Isle County:	
Grand Isle district Alburg, Isla La Motte, North Hero, South Hero, Grand Isle.	Fred E. Cargill, Alburg.
Lamoille:	
East district Hyde Park, Eden, Wolcott.	Harold P. Crosby, Hyde Park.
South district Morristown, Stowe, Elmore.	Carlton D. Howe, Morrisville.
West district Cambridge, Johnson, Waterville, Belvidere.	L. E. Bell, Johnson.
Orange County:	
East district Bradford, Fairlee, Vershire, Corinth, Cookville, I., Topsham.	Edward L. Clark, Bradford.
Northwest district Chelsea, Williamstown, Washington, Orange.	W. F. Glover, Williamstown.
Southwest district Randolph I., Randolph T., Brookfield, Braintree.	George W. Patterson, Randolph.
Southeast district Thetford, West Fairlee, Strafford, Norwich, Sharon.	Charles P. McKnight, South Strafford.
Orleans County:	
North district Newport I., Newport T., Newport Ctr. I., Coventry, Irasburg.	Ernest A. Hamilton, Newport.
East district Charleston, Holland, Morgan, Brownington, Westmore.	Edwin S. Boyd, West Charleston.
Central district Barton I., Orleans I., Barton T., Glover, Albany.	Clayton L. Erwin, Barton.
South district Hardwick I., Hardwick T., Stannard, Craftsbury, Greensboro.	Clarence L. Cowles, Craftsbury.
West district North Troy, Troy, Jay, Westfield, Lowell.	B. A. Colby, North Troy.
Rutland County:	
North district Brandon I., Brandon T., Hubbardton, Sudbury, Whiting, Leicester, Goshen.	M. A. Sturtevant, Brandon.

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[1] For other superintendents of Vermont see p. 89.

XII.—COUNTY AND OTHER LOCAL SUPERINTENDENTS OF SCHOOLS—Continued.

Supervision district.	District superintendent.
VERMONT—continued.	
Rutland County—Con.	
Northeast district Proctor, Chittenden, Pittsford, Rutland T.	William A. Beebe, Proctor.
Central district Castleton, West Rutland, Ira, Fair Haven T., West Haven.	Philip R. Leavenworth, Castleton.
West district Poultney, Fair Haven I., Wells, Middletown Springs.	Willis H. Hosmer, Fair Haven.
Southwest district Wallingford, Mendon, Clarendon, Tinmouth, Danby, Mt. Tabor.	E. L. Eddy, Wallingford.
Washington County:	
Northeast district Cabot, Calais, Woodbury, Marshfield.	Joseph W. Butterfield, North Montpelier.
Central district East Montpelier, Plainfield, Worcester, Middlesex, Moretown.	Walter B. Lance, Plainfield.
South district Northfield I., Northfield T., Roxbury, Berlin.	J. Allen Hunter, Northfield
West district Waterbury, Duxbury, Fayston, Warren, Waitsfield.	M. W. Chaffee, Waterbury.
Barre Town district Barre Town.	George J. Seager, South Barre.
Windham County:	
Northwest district Londonderry, Weston, Winhall, Peru, Landgrove, Jamaica, Windham.	A. D. Wiggin, South Londonderry.
Windham County—Con.	
Central district Newfane, Townshend, Dover, Wardsboro, Grafton, Athens, Brookline, Stratton.	George B. Whitney, Townshend.
East district Brattleboro T., Dummerston, Putney, Westminster.	Ethel A. Eddy, West Brattleboro.
Southeast district Halifax, Guilford, Vernon, Marlboro.	Harold E. Moffitt, West Brattleboro.
Southwest district Wilmington, Whitingham, Readsboro, Stamford, Somerset, Searsburg.	Frank E. Sawyer, Readsboro.
Windsor County:	
North district Bethel I., Bethel T., Royalton, Tunbridge.	V. K. Brackett South Royalton.
Central district Woodstock, Bridgewater, Barnard, Pomfret.	Everett V. Perkins, Woodstock.
East district Windsor, Hartland, West Windsor, Reading.	George L. Spaulding, Windsor.
South district Chester, Weathersfield, Cavendish, Duttonsville I., Baltimore, Andover.	Percy H. Blake, Chester.
West district Ludlow, Plymouth, Mt. Holly, Shrewsbury.	L. M. Darling, Ludlow.
Northwest district Rochester I., Rochester T., Hancock, Granville, Pittsfield, Sherburne, Stockbridge.	Samuel H. Erskine, Rochester.

Division.[1]	Division superintendent.
VIRGINIA.	
Accomac	G. G. Joynes, Onancock.
Albemarle	H. M. McManaway, Charlottesville.
Alexandria	Fletcher Kemp, Rosslyn.
Alleghany	J. G. Jeter, Covington.
Amelia	W. R. Wrigglesworth, Blackstone.
Amherst	C. L. Scott, Amherst.
Appomattox	N. R. Featherston, Vera.
Augusta	F. M. Somerville, Staunton, R. F. D. 6.
Bath	J. E. Dobbins, Millboro.
Bedford	C. M. Abbot, Bellevue.
Bland	Frank L. Dunn, Bland.
Botetourt	E. A. Painter, Fincastle.
Brunswick	R. Lee Chambliss, Rawlings.
Buchanan	M. L. Combs, Grundy.
Buckingham	John A. Twyman, Wingina, R. F. D.
Campbell	W. L. Garbee, Lawyers.
Caroline	John Washington, Milford.
Carroll	J. Lee Cox, Woodlawn.
Charles City	A. C. Cooper, Toano.
VIRGINIA—contd.	
Charlotte	E. H. Hall, Drakes Branch.
Chesterfield	Philip M. Tyler, Chester.
Clarke	L. D. Cline, Stephens City.
Craig	J. G. Jeter, Covington.
Culpeper	T. W. Hendricks, Culpeper.
Cumberland	C. W. Dickinson, jr., Cartersville.
Dickenson	M. W. Remines, Clintwood.
Dinwiddie	G. B. Zehmer, McKenney.
Elizabeth City	John M. Willis, Hampton.
Essex	W. G. Rennolds, Center Cross.
Fairfax	M. D. Hall, Burke.
Fauquier	E. Albert Smith, Warrenton
Floyd	Isaac L. Epperly, Floyd.
Fluvanna	T. H. Shepherd, Wilmington.
Franklin	W. D. Rucker, Rocky Mount.
Frederick	L. D. Cline, Stephens City.
Giles	R. H. Farrier, Newport.
Gloucester	R. A. Folkes, Gloucester.
Goochland	C. W. Dickinson, jr., Cartersville.
Grayson	G. F. Carr, Galax.
Greene	J. N. Miller, Haywood.

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[1] Eighty divisions are coterminous with single counties and ten divisions comprise two counties each.

XII.—County and Other Local Superintendents of Schools—Continued.

Division.	Division superintendent.
VIRGINIA—contd.	
Greenesville	Henry Maclin, North Emporia.
Halifax	H. J. Watkins, South Boston.
Hanover	J. Walton Hall, Ashland.
Henrico	William L. Prince, Richmond, Henrico Court House.
Henry	W. B. Gates, Martinsville.
Highland	R. E. Mauzy, Hightown.
Isle of Wight	Gavin Rawls, Carrsville.
James City	A. C. Cooper, Toano.
King and Queen	W. G. Rennolds, Center Cross.
King George	James Ashby, Falmouth.
King William	H. Ragland Eubank, Etna Mills.
Lancaster	Frank W. Lewis, Morattico.
Lee	W. A. Wygal, Jonesville.
Loudoun	O. L. Emerick, Purcellville.
Louisa	Frank T. West, Louisa.
Lunenburg	I. T. Wilkinson, Kenbridge.
Madison	J. N. Miller, Haywood.
Mathews	G. G. Anderton, Saluda.
Mecklenburg	F. C. Bedinger, Boydton.
Middlesex	G. G. Anderton, Saluda.
Montgomery	J. B. Lucas, Blacksburg.
Nansemond	P. S. Blandford, Driver.
Nelson	B. M. Wailes, Schuyler.
New Kent	A. C. Cooper, Toano.
Norfolk	James Hurst, Norfolk.
Northampton	E. G. Tankard, Nassawadox.
Northumberland	F. W. Lewis, Morattico.
Nottoway	W. R. Wrigglesworth, Blackstone.
Orange	C. P. Cowherd, Gordonsville.
Page	John H. Booton, Luray.

Division.	Division superintendent.
VIRGINIA—contd.	
Patrick	J. Fay Reynolds, Stuart.
Pittsylvania	O. P. Ramsey, Chatham.
Powhatan	J. W. Reynolds, Powhatan.
Prince Edward	P. T. Atkinson, Hampden-Sidney.
Prince George	A. B. Bristow, Hopewell.
Princess Anne	O. B. Mears, Norfolk, R. F. D. 2.
Prince William	Chas. R. McDonald, Gainesville.
Pulaski	E. L. Darst, Dublin.
Rappahannock	H. D. Hite, Front Royal.
Richmond	Blake T. Newton, Hague.
Roanoke	R. E. Cook, Salem.
Rockbridge	E. K. Paxton, Lexington.
Rockingham	J. C. Myers, Harrisonburg.
Russell	H. W. Fugate, Lebanon.
Scott	W. D. Smith, Gate City.
Shenandoah	C. V. Shoemaker, Woodstock.
Smyth	B. E. Copenhaver, Marion.
Southampton	G. L. H. Johnson, Franklin.
Spotsylvania	J. H. Chiles, Fredericksburg.
Stafford	James Ashby, Falmouth.
Surry	L. N. Savedge, Alliance.
Sussex	A. B. Bristow, Hopewell.
Tazewell	A. S. Greever, Tazewell.
Warren	H. D. Hite, Front Royal.
Warwick	A. J. Renforth, Grafton.
Washington	W. J. Edmondson, Lodi.
Westmoreland	Blake T. Newton, Hague.
Wise	J. J. Kelly, jr., Wise.
Wythe	J. A. C. Hurt, Wytheville.
York	A. J. Renforth, Grafton.

County.	County superintendent.
WASHINGTON.	
Adams	Elizabeth M. Meyer, Ritzville.
Asotin	C. B. Thornton, Asotin.
Benton	Mrs. Lowa M. Crawford, Prosser.
Chelan	E. C. Bowersox, Wenatchee.
Clallam	Robt. A. Gilmore, Port Angeles.
Clarke	W. E. Dudley, Vancouver.
Columbia	W. W. Hendron, Dayton.
Cowlitz	Lucia Jenkins, Kalama.
Douglas	J. K. Thornton, Waterville.
Ferry	E. D. Hougland, Republic.
Franklin	E. M. Dorsey, Pasco.
Garfield	Belva L. Ball, Pomeroy.
Grant	R. L. Blackburn, Ephrata.
Grays Harbor	T. W. Bibb, Montesano.
Island	Mrs. Evelyn Spencer, Coupeville.
Jefferson	Elva S. Edwards, Port Townsend.
King	A. S. Burrows, Seattle.
Kitsap	H. W. Elliott, Port Orchard.
Kittitas	S. A. Bartlett, Ellensburg.
Klickitat	Mabel H. Hinshaw, Goldendale.
Lewis	A. C. Canterbury, Chehalis.
Lincoln	J. R. Ward, Davenport.
Mason	Mrs. Mary M. Knight, Shelton.
Okanogan	Georgian Donald, Okanogan.
Pacific	Edith Soper, South Bend.
Pend Oreille	Mrs. Mamie Johnson, Newport.
Pierce	H. R. Cox, Tacoma.
San Juan	Carrie M. Busby, Friday Harbor.
Skagit	Mabel Graham, Mount Vernon.
Skamania	W. G. Detwiler, Stevenson.

County.	County superintendent.
WASHINGTON—con.	
Snohomish	W. F. Martin, Everett.
Spokane	Jean S. Donaldson, Spokane.
Stevens	Elizabeth Stannard, Colville.
Thurston	O. C. Goss, Olympia.
Wahkiakum	Mrs. Maud K. Butler, Cathlamet.
Walla Walla	Mary Gilliam, Walla Walla.
Whatcom	Ethel Everett, Bellingham.
Whitman	S. F. Shinkle, Colfax.
Yakima	Mrs. Anna R. Nichols, North Yakima.
WEST VIRGINIA.	
Barbour	E. A. Hunt, Bellington.
Berkeley	Chas. W. Crowell, Hedgesville.
Boone	W. W. Nelson, Turtle Creek.
Braxton	J. H. Hutchison, Sutton.
Brooke	T. A. Burton, Wellsburg.
Cabell	Edward Mays, Huntington.
Calhoun	A. E. Weaver, Grantsville.
Clay	Roscoe Mullins, Clay.
Doddridge	L. L. Sadler, West Union
Fayette	J. W. Cavendish, Fayetteville.
Gilmer	J. E. Hays, Glenville.
Grant	H. F. Groves, Petersburg.
Greenbrier	W. F. Richardson, Lewisburg.
Hampshire	Arthur Slonaker, Dillons Run.
Hancock	H. O. Miller, New Cumberland.
Hardy	E. A. Hawse, Baker.
Harrison	Carl S. Lawson, Clarksburg.
Jackson	P. H. Rardin, Ripley.
Jefferson	James Grantham, Kearneysville, R. No. 1.
Kanawha	Geo. W. Jenkins, jr., Charleston.
Lewis	Ellis L. Smith, Weston.

XII.—COUNTY AND OTHER LOCAL SUPERINTENDENTS OF SCHOOLS—Continued.

County.	County superintendent.
WEST VIRGINIA—con.	
Lincoln	Fisher B. Adkins, Hamlin.
Logan	E. F. Skaggs, Logan.
Marion	W. E. Michael, Fairmont.
Marshall	H. W. McDowell, Moundsville.
Mason	M. E. Roach, Point Pleasant.
Mercer	E. B. King, Princeton.
Mineral	Luke McDowell, Keyser.
Mingo	Chas. H. Ellis, Williamson
Monongalia	Lynn Hastings, Morgantown.
Monroe	W. W. Baker, Union
Morgan	G. F. Fearnow, Berkeley Springs.
McDowell	W. C. Cook, Welch.
Nicholas	L. O. Bobbitt, Summersville
Ohio	J. H. Lazear, Wheeling, Fulton.
Pendleton	Jesse H. Cook, Circleville.
Pleasants	G. C. MacTaggart, Eureka.
Pocahontas	B. B. Williams, Marlinton.
Preston	Willis Fortney, Kingwood.
Putnam	Henry C. Hill, Winfield.
Raleigh	W. S. Rogers, Beckley.
Randolph	Troy B. Wilmoth, Elkins.
Ritchie	Austin Dotson, Harrisville.
Roane	I. B. Boggs, Spencer.
Summers	Lee Harper, Hinton
Taylor	Roy J. Martin, Grafton.
Tucker	C. R. Parsons, Parsons.
Tyler	J. T. Fonner, Middlebourne.
Upshur	B. H. Carpenter, Buckhannon
Wayne	O. J. Rife, Wayne.
Webster	Sampson N. Miller, Webster Springs.
Wetzel	D. L. Haught, New Martinsville.
Wirt	Ross Wilson, Elizabeth.
Wood	H. A. Langfitt, Parkersburg.
Wyoming	J. H. Cooper, Win lom.
WISCONSIN.	
Adams	Hannah Poppe, Friendship.
Ashland	W. P. Hagman, Mellen.
Barron	Gertrude Wahl, Barron.
Bayfield	Jessie N. Smith, Washburn.
Brown	L. J. Martell, Green Bay.
Buffalo	H. J. Niehaus, Alma.
Burnett	O. H. Caspers, Grantsburg.
Calumet	Florence Billings, Chilton.
Chippewa	Bertha Trudelle, Chippewa Falls.
Clark	Elizabeth Kennedy, Neillsville.
Columbia	Mary B. Clark, Portage.
Crawford	George Burton, Eastman.
Dane:	
First dist	Sylvanus Ames, Stoughton.
Second dist	Thos. S. Thompson, Mount Horeb.
Dodge	John Kelley, Juneau.
Door	Catherine Conley, Sturgeon Bay.
Douglas	Marie Campeau, Superior.
Dunn	Theresa Leinenkugal, Menomonie.
Eau Claire	Lillia E. Johnson, Eau Claire.
Florence	Mrs. G. W. Kinnear, Florence
Fond du Lac	Morvan Duel, Fond du Lac.
Forest	Linda Schmidt, Crandon.
Grant	T. Emery Bray, Lancaster.
Green	John N. Burns, Monroe.
Green Lake	George V. Kelley, Princeton.
Iowa	Jesse A. Van Natta, Dodgeville.
Iron	Della C. Emunson, Hurley.
Jackson	Mae E. Hardie, Taylor.
Jefferson	A. J. Thorne, Jefferson.
Juneau	Leah H. Diehl, Mauston.
Kenosha	R. L. Cundy, Silver Lake.
Kewaunce	
WISCONSIN—con.	
La Crosse	Anna M. Jenkins, Bangor.
La Fayette	W. W. Woolworth, Darlington.
Langlade	A. M. Arveson, Antigo.
Lincoln	W. S. Freeman, Merrill.
Manitowoc	Joseph Voboril, Manitowoc.
Marathon	J. E. Giessel, Wausau.
Marinette	Gertrude Schwittay, Marinette.
Marquette	James Madison, Endeavor.
Milwaukee	E. T. Griffin, Milwaukee.
Monroe	M. M. Haney, Sparta.
Oconto	Ellen B. McDonald, Oconto.
Oneida	F. A. Lowell, Rhinelander.
Outgamie	A. G. Meating, Appleton.
Ozaukee	Richard F. Beger, Fredonia.
Pepin	Cynthia Carlisle, Durand.
Pierce	H. B. Aasterud, Ellsworth.
Polk	Gail Chadwick, Balsam Lake.
Portage	Marion E. Bannach, Stevens Point.
Price	Ida Johnson, Phillips.
Racine	Isabel Swantz, Union Grove.
Richland	Jacob B. Logue, Richland Center.
Rock	O. D. Antisdel, Janesville.
Rusk	Oliver E. Rice, Ladysmith.
St. Croix	H. A. Aune, Baldwin.
Sauk	Geo. W. Davies, North Freedom.
Sawyer	Mrs. Josephine Grafton, Hayward.
Shawano	L. D. Roberts, Shawano.
Sheboygan	H. C. Dornbush, Plymouth.
Taylor	J. E. Phillips, Medford.
Trempealeau	Helen M. Berg, Whitehall.
Vernon	Maud E. Neprud, Viroqua.
Vilas	Arthur J. Austin, Eagle River.
Walworth	Helen Martin, Elkhorn.
Washburn	Lucy A. Leonard, Shell Lake.
Washington	Alva Groth, West Bend.
Waukesha	G. B. Rhoads, Waukesha.
Waupaca	R. C. Bigford, Manawa.
Waushara	Edward Coates, Wautoma.
Winnebago	Reginald E. Sanders, Oshkosh.
Wood	Geo. A. Varney, Vesper.
WYOMING.	
Albany	Mrs. N. Artisee Erickson, Laramie.
Big Horn	Mrs. Elaine Kinder, Basin.
Campbell	Anna B. Schmidt, Gillette.
Carbon	Frances B. Smith, Rawlins.
Converse	Maud Dawes, Douglas.
Crook	G. Edna McWethy, Sundance.
Fremont	Verna E. Wells, Lander.
Goshen	C. O. Downing, Torrington.
Hot Springs	Mrs. Nellie L. Wales, Thermopolis.
Johnson	Mrs. Bessie M. Bullis, Buffalo.
Laramie	Mrs. Mamie E. Hefferon, Cheyenne.
Lincoln	Mrs. Maggie F. Nicholson, Kemmerer.
Natrona	May Hamilton, Casper.
Niobrara	Amy E. Christian, Lusk.
Park	Nellie L. Underwood, Cody.
Platte	Mrs. Winifred W. Banner, Wheatland.
Sheridan	Mrs. Blanche A. Rice, Sheridan.
Sweetwater	Mrs. Miriam W. Shedden, Rocksprings.
Uinta	Mrs. Jennie M. Isherwood, Evanston.
Washakie	Mrs. W. G. Wild, Worland.
Weston	Mabel G. Kingsley, Newcastle.

XIII.—SUPERINTENDENTS OF PUBLIC SCHOOLS IN CITIES AND TOWNS.[1]

City.	Population, census of 1910.	Superintendent or supervising principal.
LABAMA.		
ama City	4,313	J. T. Roberts.
ny	6,118	Mrs. Kimball B. Jones.
ston	12,794	D. R. Murphey.
la	2,513	Alice Coleman.
mer	10,864	L. L. Vann.
ingham	132,685	J. H. Phillips.
tur	4,228	J. Floyd Collins.
an	7,016	P. W. Hodges.
a	4,259	H. L. Upshaw.
nce	6,689	F. T. Appleby.
den	10,557	W. C. Griggs.
d	4,214	Welmer C. Hughes.
nville	3,377	C. B. Gamble.
sville	7,611	R. C. Johnston.
r	2,509	
tt	3,820	W. S. Leatherwood.
le	51,521	S. S. Murphy.
gomery	38,136	W. R. Harrison.
ka	4,734	S. O. White.
nix	4,555	J. C. McAuley.
a	13,649	Arthur F. Harman.
ield	4,865	L. E. Creel.
dega	5,854	D. A. McNeil.
	4,961	John R. McLure.
loosa	8,407	James H. Foster.
mbia	3,324	R. E. Thompson.
egee	2,803	Mr. Hollnesworth.
n Springs	4,055	E. S. Pugh.
ALASKA.		
orage	3,480	T. R. McAnally.
as		Floy Tracy.
anks	3,511	
au	5,000	F. F. Sparks.
ikan		W. A. Knox.
	2,000	O. W. Baird.
z	2,500	F. G. Davis.
RIZONA.		
e	9,019	C. F. Philbrook.
n	4,874	W. D. Baker.
as	6,437	Harold Steele.
	7,083	Walter P. Bland.
i	5,010	W. E. Lutz.
es	3,511	G. H. Madden.
nix	11,134	John D. Loper.
ott	5,092	S. H. Martin.
on	13,193	Fred A. Nims.
a	2,914	C. W. McGraw.
RKANSAS.		
lelphia	2,715	W. J. Breit.
ville	3,399	Sidney Pickens.
eville	3,849	Harvey Haley.
len	3,995	T. C. Abbott.
ay	2,794	R. E. Womack.
ado	4,202	Donald Macqueen.
ka Springs	3,228	C. S. Barnett.
tteville	4,471	F. S. Root.
yce	2,794	G. R. Turrentine.
Smith	23,975	Lee Byrne.
a	8,772	E. B. Tucker.
	3,639	D. L. Paisley.
prings	14,434	O. L. Dunaway.
boro	7,123	J. P. Womack.
Rock	45,941	R. C. Hall.
rn	2,778	J. L. Pratt.
nna	4,810	Fred L. MacChesney.
	3,953	Mrs. T. A. Parke.
ort	3,557	Edgar Williams.
ARKANSAS—contd.		
North Little Rock	11,138	
Paragould	5,248	James W. Ramsey.
Pine Bluff	15,102	Junius Jordan.
Prescott	2,705	C. M. Hirst.
Rogers	2,820	M. O. Alcorn.
Russellville	2,936	W. F. Hall.
Stuttgart	2,740	John G. Rossman.
Texarkana	5,655	Ury McKenzie.
Van Buren	3,878	D. M. Riggin.
CALIFORNIA.		
Alameda	23,383	C. J. Du Four.
Alhambra	5,021	Charles E. Barber.
Anaheim	2,628	J. L. Van Derveer.
Bakersfield	12,727	H. M. Shafer.
Berkeley	40,434	H. B. Wilson.
Chico	3,750	C. H. Camper.
Coalinga	4,199	C. L. Geer.
Colton	3,980	G. H. Jantzen.
Corona	3,540	Irving O. Bragg.
Emeryville	2,613	D. B. Lacy.
Eureka	11,845	George B. Albee.
Fresno	24,892	Jerome O. Cross.
Glendale	2,746	R. D. White.
Grass Valley	4,520	James S. Hennessy
Hanford	4,829	J. E. Meadows.
Hayward	2,746	Eugene M. Knight.
Lodi	2,697	R. J. Custer.
Long Beach	17,809	W. L. Stephens.
Los Angeles	319,198	Albert Shiels.
Marysville	5,430	Jennie Malaley.
Merced	3,102	C. S. Clark.
Mill Valley	2,551	G. G. Hurt.
Modesto	4,034	W. E. Faught.
Monrovia	3,576	A. R. Clifton.
Monterey	4,923	J. H. Graves.
Napa	5,791	J. L. Shearer.
Nevada City	2,689	F. E. Tuck.
Oakland	150,174	Fred M. Hunter.
Ontario	4,274	J. W. Groves.
Orange	2,920	Charles E. Teach.
Oroville	3,859	H. P. Short.
Oxnard	2,555	R. B. Haydock.
Palo Alto	4,486	Walter H. Nichols.
Pasadena	30,291	J. M. Rhodes.
Petaluma	5,880	E. B. Dykes.
Pomona	10,207	G. Vernon Bennett.
Porterville	2,696	W. A. Ferguson.
Red Bluff	3,530	J. D. Sweeney.
Redding	3,572	Mrs. C. Cunningham.
Redlands	10,449	H. G. Clement.
Redondo Beach	2,935	C. A. Langworthy.
Richmond	6,802	Walter T. Helms.
Riverside	15,212	A. N. Wheelock.
Roseville	2,608	H. A. Burch.
Sacramento	44,696	Chas. C. Hughes.
Salinas	3,736	Philip Power.
San Bernardino	12,779	R. B. Stover.
San Diego	[illegible],578	Guy V. Whaley.
San Francisco	416,912	Alfred Roncovieri.
San Jose	28,946	Alexander Sherriffs.
San Leandro	3,471	Guy Smith.
San Luis Obispo	5,157	Arthur H. Mabley.
San Mateo	4,384	Geo. W. Hall.
San Rafael	5,934	Roger S. Phelps.
Santa Ana	8,429	J. A. Cranston.
Santa Barbara	11,659	A. C. Olney.
Santa Clara	4,348	W. J. Haywood.
Santa Cruz	11,146	J. W. Linscott.
Santa Monica	7,847	H. M. Rebok.
Santa Rosa	7,817	T. F. Brownscombe.
South Pasadena	4,649	George C. Bush.
Stockton	23,253	Ansel S. Williams.

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perintendents, supervising principals, or principals, as the case may be, for cities, towns, and incorporated villages reported as of 2,500 population or over and classed as urban in the census of 1910.

XIII.—Superintendents of Public Schools in Cities and Towns—Cont'd.

City.	Population, census of 1910.	Superintendent or supervising principal.
CALIFORNIA—con.		
Tulare	2,758	Will L. Frew.
Vallejo	11,340	A. C. Barker.
Ventura	2,945	Arthur L. Vincent.
Visalia	4,550	John E. Cuddeback.
Watsonville	4,446	T. S. MacQuiddy.
Whittier	4,550	U. G. Durfee.
Woodland	3,187	C. E. Dingle.
COLORADO.		
Alamosa	3,013	G. W. Allen.
Boulder	9,539	Wm. V. Casey.
Canon City	5,162	Milo L. Whittaker.
Colorado City	4,333	E. C. Best.
Colorado Springs	29,078	Roscoe C. Hill.
Cripple Creek	6,206	Wilson M. Shafer.
Denver	213,381	Carlos M. Cole.
Durango (District No. 9)	4,686	Emery E. Smiley.
Englewood	2,983	Chas. H. Hay.
Florence	2,712	N. R. Young.
Fort Collins	8,210	Albert H. Dunn.
Fort Morgan	2,800	W. A. Franks.
Grand Junction	7,754	R. E. Tope.
Greeley	8,179	G. E. Brown.
La Junta	4,154	R. M. Tirey.
Lamar	2,977	J. E. Hershberger.
Leadville	7,508	Joseph H. Walton.
Longmont	4,256	Charles C. Casey.
Loveland	3,651	R. W. Truscott.
Monte Vista	2,544	George R. Momyer.
Montrose	3,254	William Melcher.
Pueblo:		
District No. 1.	44,395	J. W. McClinton.
District No. 20		J. F. Keating.
Rocky Ford	3,230	R. J. Walters.
Salida	4,425	Edgar Kesner.
Sterling	3,044	J. A. Sexson.
Trinidad	10,204	H. M. Corning.
Victor	3,162	(See Cripple Creek.)
CONNECTICUT.[1]		
Ansonia	15,152	Richard T. Tobin.
Berlin	3,728	B. R. Showalter.
Bethel	3,792	Frank A. Morris.
Branford	6,047	Arthur L. Young.
Bridgeport	102,054	S. J. Slawson.
Bristol	13,502	Karl A. Reiche.
Canton	2,732	W. H. Mandrey.
Danbury	23,502	G. I. Borst.
Darien	3,946	James F. Williams.
Derby	8,991	John Lund.
East Hartford	8,138	Edward H. Gumbart.
East Windsor	3,362	Vinal H. Tibbetts.
Enfield	9,719	G. C. Bowman.
Essex	2,745	C. H. Westbrook.
Fairfield	6,134	William E. Smith.
Farmington	3,478	L. S. Mills.
Glastonbury	4,796	Francis S. Knox.
Greenwich	16,463	Edwin C. Andrews.
Griswold	4,233	Frank H. P. Clement.
Groton (P. O. Mystic)	6,495	C. R. Heath.[2]
Guilford	3,001	Charles E. Hicks.
Hamden	5,850	Margaret L. Keefe.
Hartford	98,915	Thomas S. Weaver.
Huntington	6,545	(See Shelton.)
Killingly (P. O. Danielson.)	6,564	Horace F. Turner.
Litchfield	3,005	Earl A. Childs.
CONNECTICUT—con.		
Manchester:		
Town schools.	13,641	Alfred F. Howes.
District No. 9.		F. A. Verplanck.
Meriden	32,066	David Gibbs.
Middletown	20,749	Edward B. Sellew.
Milford	4,366	H. I. Mathewson.
Montville	2,804	Eldridge Smith.
Naugatuck	12,722	Frank W. Eaton.
New Britain	43,916	Stanley H. Holmes.
New Canaan	3,667	Henry W. Saxe.
New Haven	133,605	Frank H. Beede.
New Haven (Westville district)		W. F. H. Breeze.
New London	19,659	Charles B Jennings.
New Milford	5,010	John Pettibone.
Newtown	3,012	Leo T. Hickson.
Norwalk	24,211	G. V. Buchanan.
Norwich	28,219	Edward J. Graham.
Orange (P. O. West Haven)	11,272	Edgar C. Stiles.
Plainfield	6,719	J. L. Chapman.
Plainville	2,882	Orrin Judd.
Plymouth (P. O. Terryville)	5,021	A. S. Gaylord.
Portland	3,425	James F. Connolly.
Putnam	7,280	Wm. L. MacDonald.
Ridgefield	3,118	Charlotte J. Wakeman.
Salisbury	3,522	W. M. Teague.
Seymour	4,786	R. C. Clark.
Shelton	6,545	Harry E. Fowler.
Simsbury	2,537	J. B. McLean.
Southington	6,516	Ernest C. Witham.
Sprague	2,551	—— Dillingham.
Stafford	5,233	Anson B. Handy.
Stamford	28,836	Frederick S. Camp.
Stonington	9,154	Wm. R. Snyder.
Stratford	5,712	C. C. Thompson.
Suffield	3,841	H. B. Chapman.
Thomaston	3,533	Ernest W. Small.
Thompson	4,804	F. E. Harrington.
Torrington	16,840	George J. Vogel.
Vernon (P. O. Rockville)	9,087	H. O. Clough.
Wallingford	11,155	John W. Kratzer.
Waterbury	73,141	Berlin W. Tinker.
Waterford	3,097	Eldridge Smith.
Watertown	3,850	L. K. Chance.
West Hartford	4,808	William H. Hall.
Westport	4,259	John A. Young.
Wethersfield	3,148	J. Allen Hunter.
Winchester (P. O. Winsted)	8,679	Frank E. Fisk.
Windham (P. O. Willimantic)	12,604	Egbert A. Case.
Windsor	4,178	Daniel Howard.
Windsor Locks	3,715	Leander Jackson.
DELAWARE.		
Dover	3,720	C. W. W. Schantz.
Milford	2,603	Gilbert Nickel.
New Castle	3,351	Reeda M. Stoops.
Wilmington	87,411	C. J. Scott.
DISTRICT OF COLUMBIA.		
Washington	331,069	Ernest L. Thurston.
FLORIDA.[3]		
Apalachicola	3,065	A. A. Core.
Bartow	2,662	John A. Moore.

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[1] For other Connecticut superintendents, see p. 45.

[2] Secretary board of school visitors.

[3] The county superintendents of Florida supervise the city schools in their respective counties.

I.—Superintendents of Public Schools in Cities and Towns—Contd.

ity.	Population, census of 1910.	Superintendent or supervising principal.
—contd.		
	3,082	C. R. M. Sheppard, De Land.
l	2,812	
ima	3,482	L. L. Owens.
lle	6,183	E. R. Simmons.
ville	57,699	F. A. Hathaway.
st	19,945	V. S. Love.
y	5,032	James R. Lites.
d	3,719	John A. Moore, Bartow.
k	3,450	J. W. O'Hara.
	5,471	R. E. Hall.
	4,370	J. H. Brinson.
	3,894	A. B. Johnson.
	3,779	C. H. Price.
la	22,982	A. S. Edwards.
	3,204	C. H. Gray.
istine	5,494	D. D. Corbett.
rsburg	4,127	D. M. Hollins.
	3,570	T. W. Lawton.
se	5,018	F. S. Hartsfield.
	37,782	J. E. Knight.
RGIA.		
	8,190	R. E. Brooks.
is	8,063	J. E. Mathis.
	14,913	Glenn G. Bond.
	154,839	C. S. Culver, acting.
	41,040	Lawton B. Evans.
lge	4,217	E. G. Elcan.
ille	3,068	E. T. Holmes.
ick	10,182	N. H. Ballard.
on	3,297	H. B. Adams.
ille	4,067	H. L. Sewell.
wn	3,551	J. E. Purks.
us	20,554	R. B. Daniel.
	5,883	H. B. Nicholson.
on	2,697	H. B. Robertson.
t	3,210	H. C. Weir.
	5,324	J. H. Watson.
	3,827	J. C. Dukes.
	3,550	W. A. Little.
	5,759	Paul J. King.
int	3,682	J. R. Campbell.
n	6,483	W. A. Anderson.
ld	5,795	J. E. Ricketson.
lley	2,697	Ralph O. Newton.
ille	5,925	J. A. Mershon.
	7,478	J. A. Jones.
sville	3,420	J. F. Lambert.
ge	5,587	F. F. Rowe.
	40,665	C. H. Bruce.
	5,949	W. T. Dumas.
ville	4,385	J. H. Marshburn.
	3,029	Charles F. Fawcett.
	3,349	J. Harold Saxon.
	5,548	B. F. Pickett.
a	3,915	H. D. Knowles.
	12,099	Walter P. Jones.
ville	2,641	C. B. Quillian.
h	65,064	Carleton B. Gibson.
ro	2,529	R. M. Monts.
ville	4,361	C. L. Kemper.
ville	6,727	B. B. Broughton.
	3,120	J. I. Allman.
n	7,656	W. O. Roberts.
gton	3,065	J. W. Mosley.
s	14,485	A. G. Miller.
boro	2,729	Jack Lance.
AHO.		
	17,358	C. E. Rose.
l	3,543	H. H. Clifford.
Alene	7,291	J. V. Buck.
alls	4,827	Theo. B. Shank.

City.	Population, census of 1910.	Superintendent or supervising principal.
IDAHO—contd.		
Lewiston	6,043	Frank W. Simmonds.
Moscow	3,670	J. H. Rich.
Nampa	4,205	C. J. Brosman.
Pocatello	9,110	Walter R. Siders.
Sandpoint	2,993	A. Tyndall Park.
Twin Falls	5,258	Harold G. Blue.
Wallace	3,000	C. D. Brock.
Weiser	2,600	D. C. Neifert.
ILLINOIS.		
Alton	17,528	W. C. Reavis.
Anna	2,809	Chas. A. Harper.
Aurora:		
East Side	29,807	C. M. Bardwell.
West Side		S. K. McDowell.
Averyville (P. O. Peoria).	2,668	Harry E. Iler.
Batavia	4,436	H. C. Storm.
Beardstown	6,107	H. G. Russell.
Belleville	21,122	O. F. Weber.
Belvidere	7,253	J. W. Browning.
Benton	2,675	Ralph W. Jackson.
Berwyn	5,841	Eugene A. Wilson.
Bloomington	25,768	J. K. Stableton.
Blue Island	8,043	J. E. Lemon.
Bridgeport	2,703	J. A. Egelhoff.
Bushnell	2,619	W. T. Everitt.
Cairo	14,548	Taylor C. Clendenen.
Canton	10,453	G. W. Gayler.
Carbondale	5,411	A. R. Boone.
Carlinville	3,616	H. J. Blue.
Carmi	2,833	Joseph Gersbacher.
Carterville	2,971	O. A. Towns.
Centralia	9,680	S. H. Bohn.
Champaign	12,421	W. W. Earnest.
Charleston	5,884	De Witt Elwood.
Chester	2,747	C. O. Todd.
Chicago	2,185,283	Peter A. Mortenson.
Chicago Heights	11,525	Floyd T. Goodier.
Cicero	14,557	W. W. Lewton.
Clinton	5,165	H. H. Edmunds.
Coal City	2,667	Barbara Vollmer.
Collinsville	7,478	C. H. Dorris.
Danville	27,871	Gilbert P. Randle.
Decatur	31,140	James O. Engleman.
De Kalb	8,102	F. R. Ritzman.
Dixon:		
North Side	7,216	H. H. Hagan.
South Side		J. H. Light.
Downers Grove	2,601	George C. Butler.
Dundee	5,100	Osher Schlaifer.
Duquoin	5,454	R. B. Templeton.
East Moline	2,665	D. B. Hoffman.
East St. Louis	58,547	D. Walter Potts.
Edwardsville	5,014	C. F. Ford.
Effingham	3,898	Francis M. Ingler.
Eldorado	3,366	James Lyon.
Elgin	25,976	Robert I. White.
Evanston:		
District No. 75	24,978	F. W. Nichols.
District No. 76		
Fairbury	2,505	E. W. Powers.
Forest Park	6,394	Henry Buellesfield.
Freeport	17,567	S. E. Raines.
Galena	4,835	Katherine H. Obye.
Galesburg	22,089	T. W. Callihan.
Geneseo	3,199	John C. Reeder.
Granite City	9,903	L. P. Frohardt.
Greenville	3,178	E. W. Martin.
Harrisburg	5,309	T. O. Elliott.
Harvard	3,008	Chas. O. Haskell.
Harvey	7,227	F. L. Miller.
Havana	3,525	T. E. Savage.
Herrin	6,861	Ray V. Jordan.
Highland	2,675	C. L. Dietz.

XIII.—SUPERINTENDENTS OF PUBLIC SCHOOLS IN CITIES AND TOWNS—Contd.

City.	Population, census of 1910.	Superintendent or supervising principal.
ILLINOIS—contd.		
Highland Park:		
District No. 107.	4,209	Jesse L. Smith.
District No. 108.		Clark G. Wright.
Hillsboro	3.424	H. J. Beckemeyer.
Hoopeston	4,698	William R. Lowery.
Jacksonville	15,256	H. A. Perrin.
Jerseyville	4.113	D. R. Henry.
Johnston City	3.248	C. J. Ramsay.
Joilet	34.670	R. O. Stoops.
Kankakee	13,986	Franklin N. Tracy.
Kewanee	9.307	W. R. Curtis.
La Grange	5.282	A. S. Anderson.
Lake Forest	3.349	J. E. Baggett.
La Salle	11.537	J. B. McManus.
Lawrenceville	3.235	E. E. Grounds.
Lincoln	10.892	W. J. Hawkes.
Litchfield	5,971	D. H. Wells.
Lockport	2.555	R. L. Spires.
Macomb	5.774	J. I. Lynch.
Madison	5.046	Henry S. Stice.
Marion	7.093	B. F. Parr.
Marseilles	3.291	M. R. Grigsby.
Marshall	2.569	H. E. Slusser.
Mattoon	11,456	J. F. Wiley.
Maywood (District No. 89).	8,033	Eugene La Rowe.
Melrose Park	4,806	
Mendota	3,806	K. M. Snapp.
Metropolis	4.655	C. A. McGinnis.
Moline	24,199	Lewis A. Mahoney.
Monmouth	9,128	L. L. Caldwell.
Morris	4,563	E. D. Martin.
Mound City	2,837	Mary Roberson.
Mount Carmel	6,934	A. F. Lyle.
Mount Olive	3,501	Leonodus Harr.
Mount Vernon	8,007	William Miner.
Murphysboro	7,485	S. J. Shomaker.
Naperville	3,449	O. A. Waterman.
Normal	4,024	Chester F. Miller.
North Chicago	3,306	F. E. Deyoe.
Oak Park	19,444	William J. Hamilton.
Oglesby	3,194	N. M. Mason.
Olney	5,011	H. W. Hostettler.
Ottawa	9,535	C. J. Byrne.
Pana	6,055	J. Louis Hart.
Paris	7,664	T. J. Beecher.
Paxton	2.912	O. J. Bainum.
Pekin	9,897	Robert C. Smith.
Peoria	66,950	Alfred W. Beasley.
Peru	7,984	A. H. Karn.
Petersburg	2,587	J. B. Hendricks.
Pinckneyville	2,722	B. Q. Hoskinson.
Pontiac	6,090	G. J. Koons.
Princeton	4,131	H. E. Waits.
Quincy	36,587	Charles M. Gill.
Robinson	3,863	Harry E. Green.
Rochelle	2,732	H. A. Winner.
Rock Falls	2,657	Chas. Holsinger.
Rockford	45,401	Carroll R. Reed.
Rock Island	24,335	E. C. Fisher.
St. Charles	4,046	B. F. Stalcup.
Salem	2,669	J. T. Dorris.
Sandwich	2,557	W. W. Woodbury.
Savanna	3,691	C. H. Le Vitt.
Shelbyville	3,590	William Harris.
Sparta	3,081	W. H. W. Wasson.
Springfield	51,678	I. M. Allen.
Spring Valley	7,035	Irving Munson.
Staunton	5,048	W. E. Eccles.
Sterling:		
District No. 8.	7,067	Miss A. L. Hill.
District No. 11		Clarence Selby.
Streator	14,253	H. B. Fisher.
Sullivan	2,621	T. H. Finley.
Sycamore	3,926	O. E. Peterson.
Taylorville	5,446	Edgar S. Jones.
Urbana	8,254	A. P. Johnson.
Vandalia	2,974	O. C. Bailey.
Venice	3,718	S. J. McComis.
Virden	4,000	Clyde Slone.
Waukegan	16,069	John S. Clark.
West Hammond	4,948	Otis W. Glamore.
Westville	2,607	Sherman Cass.
Wheaton	3,423	J. B. Russell.
Whitehall	2,854	Robert G. Smith.
Wilmette	4,943	J. R. Harper.
Winnetka	3,168	E. N. Rhodes.
Woodstock	4,331	R. W. Bardwell.
Zion City	4,789	Joseph L. Bishop.
INDIANA.		
Alexandria	5,096	F. W. Stoler.
Anderson	22,476	W. A. Denny.
Angola	2,610	Heyman B. Allman.
Attica	3,335	Wm. F. Mullinnix.
Auburn	3,919	G. W. Youngblood.
Aurora	4,410	J. R. Houston.
Bedford	8,716	E. W. Montgomery.
Bicknell	2,794	Wm. W. Carter.
Bloomington	8,838	E. E. Ramsey.
Bluffton	4,987	P. A. Allen.
Boonville	3,934	W. F. Vogel.
Brazil	9,340	Chas. P. Keller.
Clarksville (P. O. Jeffersonville).	2.743	Chas. P. Crone.
Clinton	6.229	Geo. W. McReynold.
Columbia City	3,448	C. E. Spaulding.
Columbus	8,813	Donald Du Shane.
Connersville	7,738	Edwin L. Rickert.
Crawfordsville	9,371	L. N. Hines.
Crown Point	2,526	J. M. Geiser.
Decatur	4,47	M. F. Worthmann.
Dunkirk	3,03	Harry L. Nixon.
East Chicago	19,098	Edwin N. Canine.
Elkhart	19,282	J. A. Wiggers.
Elwood	11,028	Arthur W. Konold.
Evansville	69,647	Louis P. Benezet.
Fairmount	2,506	R. B. Duff.
Fort Wayne	63,933	R. W. Himelick.
Frankfort	8,634	Lucian G. Hickman.
Franklin	4,502	J. C. Webb.
Garrett	4,149	Ray C. Pellett.
Gary	16,802	William A. Wirt.
Gas City	3,224	Norman J. Lasher.
Goshen	8,51	James Wilkinson.
Greencastle	3,790	Edwin C. Dodson.
Greenfield	4,448	Frank Larrabee.
Greensburg	5,420	E. C. Jerman.
Hammond	20,925	C. M. McDaniel.
Hartford City	6,187	A. L. Frantz.
Huntington	10,272	Jesse M. Scudder.
Indianapolis	233,650	Ellis U. Graff.
Jasonville	3.295	Jesse M. Todd.
Jeffersonville	10,412	Emmett Taylor.
Kendallville	4,981	P. C. Emmons.
Kokomo	17,010	C. V. Haworth.
La Fayette	20,081	Robert V. Hight.
Laporte	10,525	Paul Van Riper.
Lawrenceburg	3,930	Jesse W. Riddle.
Lebanon	5,474	H. G. Brown.
Linton	5,906	Slater Bartlow, jr.
Logansport	19,050	Albert H. Douglass.
Madison	6,934	Homer Long.
Marion	19,359	A. E. Highley.
Martinsville	4,529	A. L. Trester.
Michigan City	19,027	L. W. Keeler.
Mishawaka	11,886	D. W. Horton.
Mitchell	3,438	John H. Shipp.
Montpelier	2,786	L. E. Kelley.
Mount Vernon	5,563	W. S. Painter.
Muncie	24,005	T. F. Fitzgibbon.

II.—SUPERINTENDENTS OF PUBLIC SCHOOLS IN CITIES AND TOWNS—Contd.

City.	Population, census of 1910.	Superintendent or supervising principal.
NA—contd.		
lbany	20,629	H. A. Buerk.
stle	9,446	E. J. Llewellyn.
sville	5,073	Alvin C. Payne.
Vernon	2,915	G. M. Hopkins.
	10,910	E. B. Wetherow.
uth	3,838	Louis E. Steinbach.
nd	5,130	Grant E. Derbyshire.
ton	6,448	James W. Stott.
mond	22,324	J. T. Giles.
ster	3,364	A. L. Whitmer.
ort	2,736	Charles E. Skinner.
ille	4,925	J. H. Scholl.
our	6,305	T. A. Mott.
yville	9,500	J. W. Holton.
Bend	53,684	J. F. Nuner.
an	4,115	C. N. Vance.
ity	3,369	Christian Newman.
Haute	58,157	C. J. Waits.
n	4,075	H. M. Dixon.
City	3,209	O. H. Greist.
raiso	6,987	C. W. Boucher.
nnes	14,895	J. W. Foreman.
sh	8,687	Owen J. Neighbours.
w	4,430	James M. Leffel.
ington	7,854	Ralph N. Tirey.
Lafayette	3,867	F. A. Burtsfield.
Terre Haute	3,083	T. V. Pruitt.
ng	6,587	J. H. Hoskinson.
hester	4,266	Oscar R. Baker.
IOWA.		
	4,969	Harry D. Kies.
a	2,908	J. F. Overmyer.
	4,223	E. J. Bodwell.
osa	2,983	T. M. Clevenger.
tic	4,560	A. L. Boyer.
Plaine	3,121	George S. Wooten.
	10,347	E. C. Meredith.
gton	24,324	W. L. Hanson.
l	3,546	E. T. Housh.
Falls	5.012	F. L. Mahannah.
Rapids	32,811	J. J. McConnell.
ville	6,238	H. M. Taylor.
on	3.794	I. L. Guernsey.
s City	5,892	Claude F. Brown.
kee	4,884	F. W. Johansen.
da	3,832	Ernest L. Weaver.
n	25,577	Frank W. Hicks.
	2,524	S. A. Potts.
il Bluffs	29.292	Theodore Saam.
	2,658	A. I. Tiss.
n	6.924	Adam Pickett.
port	43,028	Frank L. Smart.
ah	3,592	Eva M. Fleming.
on	3,133	C. E. Humphrey.
oines	86,368	Z. C. Thornburg.
que	38,494	James H. Harris.
Grove	3,387	W. H. Fasold.
rville	3,404	F. H. Sunderlin.
ld	4,970	Arthur W. Crane.
Dodge	15,543	L. H. Minkel.
Madison	8,900	Jas. W. Fish.
ood	4,052	J. R. Neveln.
ell	5,036	Eugene Henely.
ton	2.617	B. W. Tallman.
n	2,570	Mary J. Wyland.
endence	3.517	T. J. Tormey.
ola	3,283	O. E. Smith.
City	10.091	L. F. Mead.
Falls	2,797	O. S. Von Krog.
k	14,008	William Aldrich.
ille	3,190	J. M. Davis.
rs	4.157	S. T. Neveln.
hester	2,758	I. S. Hilliard.
keta	3,570	B. S. Moyle.
a	4,400	O. M. Carson.

City.	Population, census of 1910.	Superintendent or supervising principal.
IOWA—contd.		
Marshalltown	13,374	A. Palmer.
Mason City	11,230	F. T. Vasey.
Missouri Valley	3,187	M. C. Galpin.
Mount Pleasant	3,874	C. W. Cruikshank.
Muscatine	16,178	Ira H. McIntire.
Mystic	2,063	Chas. C. Foley.
Newton	4,616	H. P. Smith.
Oelwein	6,028	Silas W. Johnson.
Oskaloosa	9,466	O. P. Flower.
Ottumwa	22,012	H. E. Blackmar.
Pella	3,021	F. M. Frush.
Perry	4,630	H. W. Chehock.
Red Oak	4,830	J. R. Inman.
Sheldon	2,941	E. S. Selle.
Shenandoah	4,976	C. F. Garrett.
Sioux City	47,828	M. G. Clark.
Spencer	3,005	J. R. McAnelly.
Valley Junction	2,573	J. S. Holer.
Vinton	3.336	K. D. Miller.
Washington	4,308	C. J. Schmitt.
Waterloo:		
East Side	26,693	C. W. Kline.
West Side		A. T. Hukill.
Waverly	3,205	W. H. Ray.
Webster City	5,208	D. M. Kelly.
Winterset	2,818	M. R. Hassel.
KANSAS.		
Abilene	4,118	W. A. Stacey.
Anthony	2,669	T. A. Edgerton.
Arkansas City	7,508	C. E. St. John.
Atchison	16.429	H. P. Study.
Beloit	3,082	W. O. Steen.
Caney	3,597	P. B. Humphry.
Chanute	9.272	John F. Hughes.
Cherryvale	4,304	N. A. Baker.
Clay Center	3,438	Emil Kratochvil.
Coffeyville	12,687	Thomas Scott.
Columbus	3,064	M. L. Catlett.
Concordia	4.415	J. E. Edgerton.
Council Grove	2,545	J. J. Haney.
Dodge City	3,214	R. E. Long.
Eldorado	3.129	J. W. Murphy.
Emporia	9.058	L. A. Lowther.
Fort Scott	10,463	H. P. Ramsey.
Fredonia	3.040	A. I. Decker.
Frontenac	3,396	H. L. Paslay.
Galena	6,096	E. E. Stonecipher.
Garden City	3,178	E. J. Dumond.
Great Bend	4,622	A. L. Bell.
Herington	3,273	E. E. Mitchell.
Hiawatha	2,974	George Pinney.
Holton	2,842	E. W. Leamer.
Horton	3,600	Fred Thompson.
Humboldt	2,548	Chas. M. Hilleary
Hutchinson	16,364	J. O. Hall
Independence	10,480	C. S. Risdon.
Iola	9,032	Charles Wagner.
Junction City	5,598	J. H. Clement.
Kansas City	82,331	M. E. Pearson.
Kingman	2,570	Guy H. Goggard.
Larned	2,911	R. V. Phinney.
Lawrence	12,374	Raymond A. Kent.
Leavenworth	19,363	M. E. Moore.
McPherson	3,546	R. W. Potwin.
Manhattan	5,722	E. B. Gift.
Neodesha	2,872	V. M. Liston.
Newton	7,862	B. F. Martin.
Olathe	3,272	E. N. Hill.
Osawatomie	4,046	C. A. Axton.
Ottawa	7,650	A. F. Senter.
Paola	3,207	Mabel Kent.
Parsons	12,463	John F. Barnhill.
Pittsburg	14,755	John F. Bender.
Pratt	3,302	J. F. Reynolds.
Rosedale	5,960	Armon P. Vaughn.

XIII.—SUPERINTENDENTS OF PUBLIC SCHOOLS IN CITIES AND TOWNS—Contd.

City.	Population, census of 1910.	Superintendent or supervising principal.
KANSAS—contd.		
Salina	9,688	W. S. Heusner.
Topeka	43,684	A. J. Stout.
Wellington	7,034	Gordon E. Bailey.
Wichita	52,450	L. W. Mayberry.
Winfield	6,700	J. W. Gowans.
KENTUCKY.		
Ashland	8,688	J. W Brainer.
Bellevue (P. O. Newport)	6,683	J. W. Ireland.
Bowling Green	9,173	T. C. Cherry.
Catlettsburg	3,520	J. O. Faulkner.
Central City	2,545	T. S. Williams.
Corbin	2,589	T. B. Chilton.
Covington	53,270	H. S. Cox.
Cynthiana	3,603	R. I. Cord.
Danville	5,420	L. C. Bosley.
Dayton	6,979	L. N. Taylor.
Earlington	3,931	C. E. Dudley.
Frankfort	10,465	H. C. McKee.
Franklin	3,063	E. B. Weathers
Fulton	2,575	J. C. Cheek.
Georgetown	4,533	L. G. Wesley.
Harrodsburg	3,147	J. G. Prather.
Henderson	11,452	J W. Welch.
Hickman	2,736	J. M. Calvin.
Hopkinsville	9,419	T. C. Waller.
Lebanon	3,077	J. R. Sterrett.
Lexington	35,099	M. A. Cassidy.
Louisville	223,928	O. L. Reid.
Ludlow	4,163	W. D. Reynolds.
Madisonville	4,966	R. H. Gatton.
Mayfield	5,916	G. A. Young.
Maysville	6,141	W. J. Caplinger.
Middlesboro	7,305	T. W. Oliver.
Morganfield	2,725	R. A. Edwards.
Mount Sterling	3,932	W. O. Hopper.
Newport	30,309	W. P. King.
Nicholasville	2,935	H. L. Smith.
Owensboro	16,011	J. H. Risley.
Paducah	22,760	Ralph Yakel.
Paris	5,859	Lee Kirkpatrick.
Princeton	3,015	S. V. Medling.
Richmond	5,340	D. W. Bridges
Russellville	3,111	W. N. Shackleford.
Shelbyville	3, 12	J. T. Hazelrigg.
Somerset	4,491	J. P. W. Brouse.
Winchester	7,156	O. H. Harris.
LOUISIANA.		
Abbeville	2,907	J. H. Williams.
Alexandria	11,213	C. C. Henson.
Baton Rouge	14,897	P. H. Griffith.
Covington	2,601	A. J. Park.
Crowley	5,099	J. W. Mobley.
Donaldsonville	4,090	R. S. Vickers.
Franklin	3,857	Charles Gott.
Hammond	2,942	W. J. Dunn.
Houma	5,024	H. L. Bourgeois.
Jennings	3,925	W. P. Arnette.
Kentwood	3,609	Paul Weiss.
Lafayette	6,392	L. J. Alleman.
Lake Charles	11,449	James N. Yeager.
Minden	3,002	C. H. Young.
Monroe	10,209	Ernest L. Neville.
Morgan City	5,477	L. A. Law.
Natchitoches	2,532	
New Iberia	7,499	
New Orleans	339,075	Jos. M. Gwinn.
Opelousas	4,623	W. C. Perrault.
Patterson	2,908	P. C. Rogers, jr.
Plaquemine	4,955	Hugh J. Smith.
Ruston	3,377	H. L. Campbell.

City.	Population, census of 1910.	Superintendent or supervising principal.
LOUISIANA—con.		
Shreveport	28,015	C. E. Byrd.
Thibodaux	3,824	W. S. Lafargue.
Winnfield	2,925	A. Leonard Allen.
MAINE.[1]		
Auburn	15,064	H. H. Randall.
Augusta	13,211	Herman H. Stuart.
Bangor	24,803	D. L. Wormwood.
Bar Harbor	4,441	Frank McGouldrick.
Bath	9,396	G. A. Stuart.
Belfast	4,618	Edward E. Roderick.
Biddeford	17,079	I. Z. Allen.
Brewer	5,667	Fred W. Burrill.
Bridgton	2,660	F. E. Russell.
Brunswick	6,621	John H. Cone.
Calais	6,116	W. H. Phinney.
Camden	3,015	B. E. Packard.
Caribou	5,377	C. A. Grant.
Chelsa (P. O. Whitefield).	3,216	Raymond C. Beals.
Dexter	3,530	Jas. A. Hamlin.
East Livermore (P. O. Livermore Falls).	2,641	J. H. Carter.
Eastport	4,961	W. H. Sturtevant.
Ellsworth	3,549	William H. Patten.
Fairfield	4,435	H. E. Bowman.
Farmington	3,210	Wm. B. Woodbury.
Fort Fairfield	4,381	C. E. Glover.
Fort Kent	3,710	Joseph F. Cyr.
Gardiner	5,311	Leland A. Ross.
Gorham	2,822	(See Westbrook.)
Hallowell	2,864	W. F. Packard.
Houlton	5,845	Thomas P. Packard.
Jay	2,987	Merton T. Goodrich.
Kennebunk	3,099	Isaac H. Storer.
Kittery	3,533	(See York.)
Lewiston	26,247	C. W. Bickford.
Lisbon (P. O. Lisbon Falls).	4,116	A. Raymond Carter.
Lubec	3,363	Maynard E. Wright.
Madison	3,379	L. W. Gerrish.
Millinocket	3,368	W. M. Marr.
Milo	2,556	F. L. Higgins.
Norway	3,002	True C. Morrill.
Old Town	6,317	W. O. Chase.
Orono	3,555	(See Old Town).
Paris	3,436	M. C. Joy.
Pittsfield	2,891	Wm. E. Stuart.
Portland	58,571	Wm. D. Fuller.
Presque Isle	5,179	(See Old Town.)
Rockland	8,174	Roscoe L. West.
Rumford	6,777	L. E. Williams.
Saco	6,583	T. T. Young.
Sanford	9,049	R. P. Mitchell.
Skowhegan	5,341	L. W. Gerrish.
South Berwick	2,935	Wm. C. McCue.
South Portland	7,471	S. M. Hamlin.
Van Buren	3,065	C. L. O'Connell.
Waldoboro	2,656	V. V. Thompson.
Waterville	11,458	Chas. N. Perkins.
Westbrook	8,281	Richard J. Libby.
Winslow	2,709	George E. Paine.
York	2,802	Eugene S. Foster.
MARYLAND.[2]		
Annapolis	8,609	George Fox.
Baltimore	558,485	Charles J. Koch.
Brunswick	3,721	G. L. Palmer, Frederick.
Cambridge	6,407	James B. Noble.
Chestertown	2,735	Edw. J. Clarke.

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[1] For other Maine superintendents see p. 52.

[2] The county superintendents of Maryland supervise the city schools in their respective counties. Baltimore City has a separate school organization.

XIII.—SUPERINTENDENTS OF PUBLIC SCHOOLS IN CITIES AND TOWNS—Contd.

City.	Population, census of 1910.	Superintendent or supervising principal.
MARYLAND—con.		
Crisfield	3,468	W. H. Dashiell, Princess Anne.
Cumberland	21,839	Edw. F. Webb.
Easton	3,083	Nicholas Orem.
Frederick	10,411	G. Lloyd Palmer.
Frostburg	6,028	Edw. F. Webb, Cumberland.
Hagerstown	16,507	Chas. E. Dryden.
Havre de Grace	4,212	C. M. Wright, Bel Air.
Salisbury	6,690	J. M. Bennett.
Westernport	2,702	Edw. F. Webb, Cumberland.
Westminster	3,295	M. S. H. Unger.
MASSACHUSETTS.[1]		
Abington	5,455	C. A. Record.
Adams	13,026	Francis A. Bagnall.
Agawam	3,501	W. E. Gushee.
Amesbury	9,894	Edmund K. Arnold.
Amherst	5,112	J. D. Brooks.
Andover	7,301	H. C. Sanborn.
Arlington	11,187	George C. Minard.
Athol	8,536	W. S. Ward.
Attleboro	16,215	L. A. Fales.
Ayer	2,797	F. C. Johnson.
Barnstable	4,676	G. H. Galger.
Barre	2,957	Albert S. Cole.
Belmont	5,542	George P. Armstrong.
Beverly	18,650	S. H. Chace.
Billerica	2,789	E. C. Vining.
Blackstone	5,648	Harry Gardner.
Boston	670,585	Frank V. Thompson.
Braintree	8,066	Charence N. Flood.
Bridgewater	7,688	C. A. Record.
Brockton	56,878	John F. Scully.
Brookline	27,792	Geo. I. Aldrich.
Cambridge	101,839	Michael E. Fitzgerald.
Canton	4,797	J. C. Davis.
Chelmsford	5,010	Walter K. Putney.
Chelsea	32,452	Frank E. Parlin.
Chicopee	25,401	John C. Gray.
Clinton	13,075	Thomas F. Gibbons.
Cohasset	2,585	Stanley C. Lary.
Concord	6,421	Wells A. Hall.
Dalton	3,568	H. L. Allen.
Danvers	9,407	Frederic B. Knight.
Dartmouth	4,378	F. L. Kendall.
Dedham	9,284	Roderick W. Hine.
Dracut	3,461	C. L. Randall.
Dudley	4,267	W. F. Sims.
East Bridgewater	3,363	Edgar H. Grout.
Easthampton	8,524	W. D. Miller.
Easton	5,139	C. E. Wheeler.
Everett	33,484	Fairfield Whitney.
Feir Haven	5,122	O. H. Toothaker.
Fall River	119,295	H. L. Belisle.
Falmouth	3,144	Carl Holman.
Fitchburg	37,826	E. W. Robinson.
Foxboro	3,863	Ira A. Jenkins.
Framingham	12,948	Ernest W. Fellows.
Franklin	5,641	Arthur W. Hale.
Gardner	14,699	Fordyce T. Reynolds
Gloucester	24,398	T. M. Haines.
Grafton	5,705	Geo. A. Coe.
Great Barrington	5,926	Russell H. Bellows.
Greenfield	10,427	Winthrop P. Abbott.
Hardwick	3,524	(See Barre.)
Haverhill	44,115	Clarence H. Dempsey.
Hingham	4,965	O. K. Collins.
Holbrook	2,816	James J. Quinn.
Holliston	2,711	Carroll H. Drown.
Holyoke	57,730	Francis McSherry.
MASSACHUSETTS—continued.		
Hudson	6,743	C. S. Lyman.
Ipswich	5,777	Joseph I. Horton.
Lawrence	85,892	Bernard M. Sheridan
Lee	4,106	Clarence E. Michels.
Leicester	3,237	George B. Clarke.
Lenox	3,060	C. A. Tucker.
Leominster	17,580	Wm. H. Perry.
Lexington	4,918	A. H. Carver.
Lowell	106,294	H. J. Molloy.
Ludlow	4,948	W. E. Gushee.
Lynn	89,336	Charles S. Jackson.
Malden	44,404	Farnsworth G. Marshall.
Manchester	2,673	John C. Mackin.
Mansfield	5,183	Everett W. Robinson.
Marblehead	7,338	L. Thomas Hopkins.
Marlboro	14,579	Ernest P. Carr.
Maynard	6,390	William H. Mullington.
Medfield	3,466	Albert S. Ames.
Medford	23,150	Fred H. Nickerson.
Medway	2,696	Carroll H. Drown.
Melrose	15,715	John C. Anthony.
Methuen	11,448	Edwin L. Haynes.
Middleboro	8,214	Charles H. Bates.
Milford	13,055	Almorin O. Caswell
Millbury	4,740	C. C. Ferguson.
Milton	7,924	Herbert J. Chase.
Monson	4,758	F. A. Wheeler.
Montague	6,866	M. O. Edson.
Nantucket	2,962	E. S. Tirrell.
Natick	9,866	Edgar L. Willard.
Needham	5,026	Nelson G. Howard.
New Bedford	96,652	Allen P. Keith.
Newburyport	14,949	William C. Moore.
Newton	39,806	Ulysses G. Wheeler.
North Adams	22,019	Burr J. Merriam.
Northampton	19,431	F. K. Congdon.
North Andover	5,529	Dana P. Dame.
North Attleboro	9,562	G. W. Morris.
Northbridge	8,807	S. A. Melcher.
North Brookfield	3,075	James Hayes.
Norton	2,544	Ira A. Jenkins.
Norwood	8,014	Austin H. Fitz.
Orange	5,282	J. F. Allison.
Oxford	3,361	O. C. Ferguson.
Palmer	8,610	Clifton H. Hobson.
Peabody	15,721	Albert Robinson.
Pepperell	2,953	A. R. Paull.
Pittsfield	32,121	Clair G. Persons.
Plymouth	12,141	Chas. A. Harris.
Provincetown	4,369	Chas. M. Pennell.
Quincy	32,642	Albert L. Barbour.
Randolph	4,301	(See Holbrook.)
Reading	5,818	Adelbert L. Safford.
Revere	18,219	Geo. M. Bemis.
Rockland	6,928	Leon O. Merrill.
Rockport	4,211	W. F. Eldredge.
Salem	43,697	William W. Andrew.
Saugus	8,047	Jesse W. Lambert.
Somerset	2,798	Fred C. Tenney.
Somerville	77,236	Charles S. Clark.
Southbridge	12,592	F. E. Corbin.
South Hadley	4,894	F. E. Whittemore.
Spencer	6,740	John J. Howard.
Springfield	88,926	James H. Van Sickle.
Stoneham	7,090	A. B. Webber.
Stoughton	6,316	L. W. Robbins.
Sutton (P. O. Auburn)	3,078	H. H. Pratt.
Swampscott	6,204	Willard M. Whitman
Taunton	34,259	Henry W. Harrub.
Templeton	3,756	A. M. Jones.
Tewkesbury	3,750	C. L. Randall.

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[1] For other Massachusetts superintendents see pp. 54–55.

XIII.—SUPERINTENDENTS OF PUBLIC SCHOOLS IN CITIES AND TOWNS—Contd.

City.	Population, census of 1910.	Superintendent or supervising principal.
MASSACHUSETTS—continued.		
Uxbridge	4,671	C. L. Judkins.
Wakefield	11,404	Willard B. Atwell.
Walpole	4,892	Harrie J. Phipps.
Waltham	27,834	Chas. N. Perkins.
Ware	8,774	G. W. Cox.
Wareham	4,102	H. N. Knox.
Warren	4,188	John Bacon.
Watertown	12,875	Wilfred H. Price.
Webster	11,509	Wm. F. Sims.
Wellesley	5,413	S. Monroe Graves.
Westboro	5,446	Thos. S. Grindle.
Westfield	16,044	Chester D. Stiles.
Westford	2,851	Frank H. Hill.
Westport	2,928	Edward L. Hill.
West Springfield	9,224	Carl Cotton.
Weymouth	12,895	Parker T. Pearson.
Whitman	7,292	Elwood T. Wyman.
Williamstown	3,708	W. G. Mitchell.
Winchendon	5,678	Albert J. Chidester.
Winchester	9,309	John R. Fausey.
Winthrop	10,132	Frank A. Douglas.
Woburn	15,308	George I. Clapp.
Worcester	145,986	H. S. Gruver.
MICHIGAN.		
Adrian	10,763	Carl H. Griffey.
Albion	5,833	L. W. Fast.
Allegan	3,419	A. H. Robertson.
Alma	2,757	A. F. Schultz.
Alpena	12,706	Robert D. Ford.
Ann Arbor	14,817	H. M. Slauson.
Battle Creek	25,267	W. G. Coburn.
Bay City	45,166	Frank A. Gause.
Belding	4,119	S. J. Skinner.
Benton Harbor	9,185	F. A. Jensen.
Bessemer	4,583	C. R. Cobb.
Big Rapids	4,519	Don Harrington.
Boyne City	5,218	A. G. Stead.
Cadillac	8,375	G. A. McGee.
Calumet	32,845	E. J. Hall.
Charlotte	4,886	Chas. H. Carrick.
Cheyboygan	6,859	W. L. Barr.
Coldwater	5,945	T. E. Johnson.
Crystal Falls	3,775	W. D. Hill.
Detroit	465,766	Charles E. Chadsey.
Dowagiac	5,088	A. F. Frazee.
East Jordan	2,516	George B. Crawford.
Escanaba	13,194	F. E. King.
Flint	38,550	A. N. Cody.
Gladstone	4,211	E. J. Willman.
Grand Haven	5,856	Arthur Dondineau.
Grand Ledge	2,893	Jonas Sawdon.
Grand Rapids	112,571	Wm. A. Greeson.
Greenville	4,045	A. R. Shigley.
Hamtramck	3,559	E. G. Van Deventer.
Hancock	8,981	H. D. Lee.
Hastings	4,383	E. J. Lederle.
Highland Park	4,120	T. J. Knapp.
Hillsdale	5,001	S. J. Gier.
Holland	10,490	E. E. Fell.
Houghton	5,113	A. W. Goodale.
Ionia	5,030	A. A. Rather.
Iron Mountain	9,216	M. B. Travis.
Ironwood	12,821	E. T. Duffield.
Ishpeming	12,448	C. L. Phelps.
Jackson	31,433	E. O. Marsh.
Kalamazoo	39,437	Ellis H. Drake.
Lansing	31,229	J. W. Sexton.
Lapeer	3,946	E. E. Irwin.
Ludington	9,132	R. H. McIntosh.
Manistee	12,381	S. W. Baker.
Manistique	4,722	T. W. Clemo.
Marine City	3,770	H. B. Thompson.
Marquette	11,503	A. R. Watson.
Marshall	4,236	William E. Olds.
MICHIGAN—con.		
Menominee	10,507	John L. Silvernale.
Midland	2,527	J. B. Mott.
Monroe	6,893	Dean S. Spencer.
Mount Clemens	7,707	Arthur S. Hudson
Mount Pleasant	3,972	G. E. Ganiard.
Munising	2,952	E. L. Abell.
Muskegon	24,062	Paul C. Stetson.
Negaunee	8,460	E. D. Denison.
Niles	5,156	O. W. Haisley.
Norway	4,974	C. J. Borchardt.
Onaway	2,702	C. T. Milner.
Otsego	2,812	Charles R. Johnson
Owosso	9,639	O. H. Voelker.
Petoskey	4,778	J. W. Kelder.
Pontiac	14,532	G. L. Jenner.
Port Huron	18,863	H. A. Davis.
River Rouge	4,163	Alex McDonald.
Saginaw:		
East Side	50,510	W. W. Warner.
West Side		F. W. Arbury.
St. Clair	2,633	O. M. Misenar.
St. Johns	3,154	Frank P. Buck.
St. Joseph	5,936	E. P. Clarke.
Sault Ste. Marie	12,615	George G. Malcolm
South Haven	3,577	T. E. Hook.
Sturgis	3,635	Carl N. Ferner.
Three Rivers	5,072	F. W. Crawford.
Traverse City	12,115	G. H. Curtis.[1]
Wyandotte	8,287	F. W. Frostic
Ypsilanti	6,230	W. B. Arbaugh.
MINNESOTA.		
Albert Lea	6,192	C. C. Baker.
Alexandria	3,001	F. M. Yockey.
Anoka	3,972	F. H. Koos.
Austin	6,960	H. E. Wheeler.
Bemidji	5,099	W. G. Bolcom.
Brainerd	8,526	W. C. Cobb.
Chisholm	7,684	J. P. Vaughan
Cloquet	7,031	Peter Olesen.
Crookston	7,559	G. H. Sanberg.
Detroit	2,807	John B. Hogen.
Duluth	78,466	Kremer J. Hoke.
East Grand Forks	2,533	F. E. Lurton.
Ely	3,572	H. E. White.
Eveleth	7,036	C. H. Barnes.
Fairmont	2,958	D. S. Brainard.
Faribault	9,001	Jno. Munroe.
Fergus Falls	6,887	W. O. Lippitt.
Hastings	3,983	Paul R. Spencer.
Hibbing	8,832	Claude C. Alexande
Lake City	3,142	C. W. Brown.
Little Falls	6,078	F. W. Dobbyn
Luverne	2,540	H. C. Bell.
Mankato	10,365	F. J. Sperry.
Melrose	2,591	E. J. Sweeney.
Minneapolis	301,408	Bennett B. Jackso
Montevideo	3,056	J. J. Bohlander.
Moorhead	,840	M. L. Jacobson
New Ulm	5,648	H. C. Hess.
Northfield	3,265	M. P. Fobes.
Owatonna	5,658	W. B. Thornburgh
Red Wing	9,048	O. W. Herr.
Richfield (P. O. Minneapolis).	2,673	May H. Dills.
Rochester	7,844	H. A. Johnson.
St. Cloud	10,600	Charles H. Maxson
St. Paul	214,744	S. O. Hartwell.
St. Peter	176	Emily Brown.
South St. Paul	4,51	D. E. Hickey.
Staples	2,558	C. E. Young.
Stillwater	10, 98	J. C. Davies.
Thief River Falls	3,714	J. H. Hay.
Two Harbors	4,990	C. E. Campton
Virginia	10,473	P. P. Colgrove.
Wabasha	2,622	L. U. Towle.

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[1] Acting.

I.—SUPERINTENDENTS OF PUBLIC SCHOOLS IN CITIES AND TOWNS—Contd.

ity.	Population, census of 1910.	Superintendent or supervising principal.
OTA—con.		
	3,054	S. C. Huffman.
nneapolis.	3,022	R. J. Mayo.
. Paul	2,660	J. W. Klinker.
r	4,135	G. A. Foster.
	18,583	J. V. Voorhees.
SSIPPI.		
n	3,708	C. P. Smith.
Louis	5,388	C. R. Talbert.
	8,049	Ned Kocher.
aven	5,293	S. M. Byrd.
	3,929	W. H. Braden.
ale	4,079	H. B. Heidleburg.
	2,581	A. E. Miller.
us	8,989	J. C. Meadows.
	5,020	M. E. Moffett.
ille	9,610	E. E. Bass.
ood	5,836	C. F. Saunders.
a	2,814	C. S. Bigham.
t	6,386	I. T. Gilmer.
burg	11.733	F. B. Woodley.
	21.262	E. L. Bailey.
	8.465	R. H. Watkins.
b	6.237	W. C. Williams.
n	23,285	D. C. Hull.
oint	3.054	W. M. Alexander.
s	11,791	J. H. Owings.
a	2,581	W. T. Garrett.
ula	3,379	S. P. Walker.
lle	2,698	R. C. Morris.
	3.881	J. C. Windham.
rg	20.814	J. P. Carr.
Valley	4,275	Martin Hemphill.
oint	4,861	J. H. Woodard.
a	2,512	O. A. Shaw.
City	6,796	H. M. Ivy.
SOURI.		
	4,148	C. W. Anderson.
lle	4,252	C. E. Chrane.
eld	5,749	Andrew Jackson.
	2,894	Fred E. Patrick.
n	2,980	A. C. Gwinn.
irardeau	8,475	J. N. Crocker.
on	3.452	Geo. D. Dieterich.
ille	4,539	W. L. Coonrod
e	9,483	W. C. Barnes.
rsville	3,655	J. H. Goodin.
ton	3.144	Geo. W. Kirk.
the	6.265	R. L. Threlkeld.
	4,992	Arthur Lee.
ia	9.662	J. E. McPherson.
	4,721	A. S. Boucher.
lo Springs.	2.503	J. A. Leach.
or Springs.	3,900	G. W. Diemer.
gton	2.613	W. L. Johns.
	2,586	C. H. Hitchborn.
	2.556	O. J. Mathias.
ver	5,112	J. U. White.
ktown	2.632	E. O. Wiley.
	5.228	J. T. Bush.
al	18,341	Livingstone McCartney.
sville	2,628	D. W. Branam.
ndence	9,859	W. L. C. Palmer.
n City	11,850	
	32.073	Wm. T. Harris.
City	248,381	Ira I. Cammack.
t	3,033	A. R. Curry.
lle	6,347	Charles Banks.
od	4.191	Nelson Kerr.
ton	5,242	B. M. Little.
	2,980	E. B. Street.

City.	Population, census of 1910.	Superintendent or supervising principal.
MISSOURI con.		
Louisiana	4,454	R. R. Rowley.
Macon	3,584	S. E. Seaton.
Maplewood	4,976	J. Richmond.
Marceline	3,920	John L. Carter.
Marshall	4,869	W. M. Westbrook.
Maryville	4,762	J. M. McDonald.
Mexico	5,939	L. B. Hawthorne.
Moberly	10,923	E. M. Sipple.
Monett	4.177	M. J. Hale.
Neosho	3,661	Charles H. Baldwin.
Nevada	7,176	J. C. Harman.
Poplar Bluff	6.916	G. W. Beswick.
Rich Hill	2,755	Roy D. Brown.
Richmond	3,664	Arthur L. Dailey.
St. Charles	9,437	Joseph Herring.
St. Joseph	77.403	Vernon G. Mays.
St. Louis	687,029	John W. Withers.
Sedalia	17,822	John P. Gass.
Sikeston	3,327	Miles C. Thomas.
Slater	3,238	W. G. Pence.
Springfield	35,201	W. W. Thomas.
Trenton	5,656	Eugene S. Briggs.
Warrensburg	4,689	Edward Beatty.
Washington	3,670	F. H. Hoff.
Webb City	11,817	C. A. Greene.
Webster Groves	7,080	Frank Hamsher.
Wellston	7.312	Ernest F. Bush.
West Plains	2,914	J. W. Pierce.
MONTANA.		
Anaconda	10,134	W. K. Dwyer.
Billings	10,031	W. H. Nye.
Bozeman	5,107	R. J. Cunningham.
Butte	39,165	W. F. Maddock.
Deer Lodge	2,570	O. D. Speer.
Great Falls	13,948	S. D. Largent.
Havre	3,624	N. C. Abbott.
Helena	12,515	John Dietrich.
Kalispell	5,549	W. D. Swetland.
Lewistown	2,992	A. A. Franzke.
Livingston	5,359	B. A. Winans.
Miles City	4,697	J. A. Burger.
Missoula	12,869	Ira B. Fee.
Red Lodge	4,860	A. C. Carlson.
NEBRASKA.		
Alliance	3,105	W. R. Pate.
Auburn	2,729	S. E. Clark.
Aurora	2,630	J. A. Doremus.
Beatrice	9,356	A. J. Stoddard.
Blair	2,584	W. H. Myers.
Chadron	2,687	T. R. Crawford.
Columbus	5,014	C. Ray Gates.
Fairbury	5,294	W. H. Morton.
Falls City	3,255	B. H. Groves.
Fremont	8,718	A. H. Waterhouse.
Grand Island	10,326	Robert J. Barr.
Hastings	9,338	T. W. B. Everhart.
Havelock	2,680	Mrs. Frank F. Adams.[1]
Holdrege	3,030	Dell Gibson.
Kearney	6,202	A. L. Caviness.
Lincoln	43,973	Jesse H. Newlon.
McCook	3,765	J. A. True.
Nebraska City	5,488	W. G. Brooks.
Norfolk	6,025	J. M. Showalter.
North Platte	4,793	Wilson Tout.
Omaha	150,355	J. H. Beveridge.
Plattsmouth	4,287	G. E. De Wolf.
University Place	3,200	A. H. Dixon.
Wymore	2,613	George E. Lee.
York	6,235	A. W. Graham.

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[1] Acting.

XIII.—SUPERINTENDENTS OF PUBLIC SCHOOLS IN CITIES AND TOWNS—Contd.

City.	Population, census of 1910.	Superintendent or supervising principal.
NEVADA.		
Goldfield	4,838	E. L. McKeoun.
Reno	10,867	B. D. Billinghurst.
Sparks	2,500	C. H. Meeker.
Tonopah	3,900	Geo. L. Dilworth.
NEW HAMPSHIRE.[1]		
Berlin	11,780	Harry L. Moore.
Claremont	7,529	Alonzo J. Knowlton.
Concord	21,497	Louis J. Rundlett.
Conway	3,413	L. M. Felch.
Derry	5,123	Charles W. Cutts.
Dover	13,247	J. E. Wignot.
Exeter	4,897	M. S. Brooks.
Farmington	2,621	F. U. Landman.
Franklin	6,132	George A. Keith.
Goffstown	2,579	Howard L. Winslow.
Haverhill	3,498	Norman J. Page.
Keene	10,068	Eugene Tuttle.
Laconia	10,183	John S. Gilman.
Lancaster	3,054	H. S. Coday.
Lebanon	5,718	H. Leslie Sawyer.
Littleton	4,069	Guy E. Speare.
Manchester	70,063	Herbert F. Taylor.
Milford	3,939	A. W. Smith.
Nashua	26,005	Charles H. Noyes.[2]
Newmarket	3,348	(See Somersworth.)
Newport	3,675	W. H. S. Ellingwood.
Pembroke	3,062	Henry S. Roberts.
Portsmouth	11,269	Wm. H. Slayton.
Rochester	8,868	Charles A. Breck.
Somersworth	6,704	Edward H. Leonard.
Walpole	2,668	E. J. Best.
NEW JERSEY.		
Asbury Park	10,150	Amos E. Kraybill.
Atlantic City	46,150	Charles B. Boyer.
Bayonne	55,545	Preston H. Smith.
Belleville	7,632	C. R. Gerard.
Bloomfield	15,070	George Morris.
Boonton	4,930	M. P. Reagle.
Bordentown	4.250	Harry V. Holloway.
Boundbrook	3,970	Gaius Hoffman.
Bridgeton	14,209	David C. Porter.
Burlington	8,336	Anna M. Reed.
Camden	94,538	James E. Bryan.
Carlstadt	3,807	George Kintner.
Cliffside Park	3,394	Robert J. Fuller.
Collingswood	4,795	Amos H. Flake.
Dover	7,468	W. V. Singer.
East Newark	3,163	W. J. Gleason.
East Orange	34,371	Albert H. Wilson.[2]
East Rutherford	4,275	F. J. Oglee.
Edgewater	2,655	W. F. Conway.
Elizabeth	73,409	Richard E. Clement.
Englewood	9,924	Elmer C. Sherman.
Flemington	2,693	Joseph N. D. Hickman.
Fort Lee	4,472	Arthur E. Chase.
Freehold	3,233	Edward E. Gaige.
Garfield	10,213	W. H. Steegar.
Glen Ridge	3,260	Sidney G. Firman.
Gloucester	9,462	Wilmer F. Burns.
Guttenberg	5,647	I. G. Miller.
Hackensack	14,050	William E. Stark.
Hackettstown	2,715	William S. Lesh.
Haddonfield	4,142	C. E. Dechant.
Haledon	2,560	Absalom Grundy.
Hammonton	5,088	N. C. Holdridge.
Harrison	14,498	J. F. Prendergast.
Hawthorne	3,400	F. H. Thoms.
Hoboken	70,324	A. J. Demarest.
Irvington	11,877	Robert Lee Saunders.
Jersey City	267,779	Henry Snyder.
Kearny	18,659	Herman Dressel.
Keyport	3,554	W. E. Bilderback.
NEW JERSEY—continued.		
Lambertville	4,657	John H. Herring.
Little Ferry	2,541	Harry Pierson.
Lodi	4,138	Edgar F. Bunce.
Long Branch	13,298	Christopher Gregory.
Madison	4,658	J. T. Godfrey.
Millville	12,451	F. J. Sickles.
Montclair	21,550	Don C. Bliss.
Morristown	12,507	J. Burton Wiley.
Newark	347,469	D. B. Corson.
New Brunswick	23,388	Ira T. Chapman.
Newton	4,467	T. L. Brooks.
North Bergen	15,662	Milton F. Husted.
North Plainfield	6,117	D. Fred Aungst.
Nutley	6,009	John R. Beachler.
Orange	29,630	W. Burton Patrick.
Passaic	54,773	Fred S. Shepherd.
Paterson	125,600	John R. Wilson.
Perth Amboy	32,121	Samuel E. Shull.
Phillipsburg	13,903	Henry J. Neal.
Plainfield	20,550	Henry M. Maxson.
Pleasantville	4,390	Wm. C. Sullivan.
Princeton	5,136	Mabel T. Vanderbilt.
Prospect Park	2,719	Thomas L. Bump.
Rahway	9,337	William F. Little.
Raritan	3,672	George A. West.
Red Bank	7,398	Paul R. Radcliffe.
Ridgewood	5,416	Ira W. Travell.
Roosevelt (P. O. Chrome).	5,786	B. V. Hermann.
Roselle	2,725	R. M. Fraunfelter.
Roselle Park (P. O. Elizabeth).	3,138	L. D. Deyo.
Rutherford	7,045	Clarence A. Fetterly.
Salem	6,614	Walter B. Davis.
Secaucus	4,740	Matthew J. Pechtel.
Somerville	5,060	W. A. Ackerman.
South Amboy	7,007	O. O. Barr.
South Orange	8,993	H. W. Foster.
South River	4,772	T. Frank Tabor.
Summit	7,500	H. B. Sprague.
Tenafly	2,756	Ralph S. Maugham.
Town of Union (P. O. Weehawken).	21,023	N. C. Billings.
Trenton	96,815	Ebenezer Mackey.
Vineland	5.282	Howard L. Reber.
Wallington	3.448	John M. Meyers.
Washington	3,567	S. M. Tressler.
Weehawken	11.228	Frank A. Balch.
Westfield	6.420	Charles A. Philhower.
West Hoboken	35.403	Arthur O. Smith.
West New York	13.560	H. W. Maxson.
West Orange	10,880	Allton H. Sherman.
Wharton	2,983	Wm. P. Curtis.
Woodbury	4,642	M. G. Thomas.
NEW MEXICO.		
Albuquerque	11,020	John Milne.
Clovis	3,255	E. W. Bowyer.
East Las Vegas	....	Walter B. McFarland.
Las Cruces	3.836	D. F. R. Rice.
Las Vegas	3.755	Mrs. Lou Cobb.
Raton	4.539	L. C. Rhoads.
Roswell	6.172	J. W. Riley.
Santa Fe	5,072	E. J. Roth.
Silver City	3.217	Lela A. Manville.
Tucumcari	2.526	U. O. Anderson.
NEW YORK.		
Albany	100,253	C. Edward Jones.
Albion	5,016	Willis G. Carmer.
Amityville	2.517	George A. Brown.
Amsterdam	31,267	H. T. Morrow.

[1] For other New Hampshire superintendents, see p. 59.

[2] Acting.

XIII.—Superintendents of Public Schools in Cities and Towns—Contd.

City.	Population, census of 1910.	Superintendent or supervising principal.
NEW YORK—con.		
Auburn	34,668	Henry D. Hervey.
Babylon	2.600	C. W. Armstrong.
Baldwinsville	3,099	A. Wesley Armitage.
Ballston Spa	4,138	W. A. Andrews.
Batavia	11.613	E. A. Ladd.
Bath	3,884	Edgar A. Lewis.
Beacon	10,629	G. F. Du Bois.
Binghamton	48,443	D. J. Kelly.
Brockport	3,579	Elizabeth S. Barclay.
Buffalo	423,715	Ernest C. Hartwell.
Canandaigua	7.217	Luther N. Steele.
Canastota	3.247	E. H. Rider.
Canton	2,701	S. C. Sumner.
Carthage	3,563	Sherman L. Howe.
Catskill	5.296	Edwin C. Hoemer.
Clyde	2,695	C. B. Adams.
Cohoes	24.709	Edward Hayward.
Cold Spring	2.549	J. F. Freeborn.
Corning:		
District No. 9	24,709	H. H. Chapman.
District No. 13		A. M. Blodgett.
Cornwall	2.658	Herman C. Woodworth.
Cortland	11,504	F. E. Smith.
Dansville	3,938	J. Murray Foster.
Depew	3,921	J. Fred Whitford.
Dobbs Ferry	3,455	B. M. Sheppard.
Dolgeville	2.685	Thos. G. Coffee.
Dunkirk	17.221	Frederick R. Darling.
East Aurora	2.781	Harry W. Mead.
East Syracuse	3.274	Delmar E. Hawkins.
Ellenville	3,114	W. Floyd Harris.
Elmira	37.176	Asher J. Jacoby.
Elmira Heights	2,732	J. C. Benedict.
Fairport	3,112	Albert T. Bouck.
Fort Edward	3.762	Franklin Barber.
Fort Plain	2.762	Herbert Preston.
Frankfort	3.303	B. C. Van Ingen.
Fredonia	5.285	William B. Blaisdell.
Freeport	4,836	Ward C. Moon.
Fulton	10 480	James R. Fairgrieve.
Geneva	12 416	A. J. Merrell.
Glens Falls	15,243	Elbert W. Griffith.
Gloversville	20,642	James A. Estee.
Goshen	5,081	Montgomery C. Smith.
Gouverneur	4,128	Alfred C. Ramsay.
Granville	3,920	R. E. Brown.
Green Island (P. O. Troy).	4,737	James Heatly.
Greenport	3,089	Seward S. Travis.
Hastings upon Hudson.	4,552	H. H. Murphy.
Haverstraw	5,669	L. O. Markham.
Hempstead	4,964	T. Peck Calkins.
Herkimer	7,520	Geo. M. Elmendorf.
Homer	2,695	J. M. Round.
Hoosick Falls	5,232	Clyde Harvey.
Hornell	13,617	F. R. Neild.
Hudson	11,417	Charles S. Williams.
Hudson Falls	5,189	Geo. A. Ingalls.
Ilion	6,588	H. M. Schwartz.
Ithaca	14,802	Frank D. Boynton.
Jamestown	31,297	R. R. Rogers.
Johnson City	3,775	Frank M. Smith.
Johnstown	10,447	Eric L. Ackley.
Kingston	25,908	Myron J. Michael.
Lackawanna	14,549	A. H. Mathewson.
Lancaster	4,364	P. J. Zeilman.
Le Roy	3,771	Earl B. Taylor.
Little Falls	12,273	E. D. Henry.
Lockport	17,970	Emmet Belknap.
Lowville	2,940	M. D. Merring.
Lyons	4,460	W. H. Kinney.
Malone	6,467	R. M. Northup.
Mamaroneck	5,699	Arthur Z. Boothby.
Massena	2,951	D. H. Naylor.
NEW YORK—con.		
Mechanicsville	6,634	E. H. Burdick.
Medina	5,683	Howard E. Broeder.
Middletown	15,313	James F. Tuthill.
Mount Kisco	2,802	Ezra W. Benedict.
Mount Morris	2,782	R. W. Sherman.
Mount Vernon	30,919	William H. Holmes.
Newark	6,227	William M. Fort.
Newburgh	27,805	Geo. F. Hall.
New Rochelle	28,867	Albert Leonard.
New York	4,766,883	W. L. Ettinger.
Niagara Falls	30,445	John B. Laidlaw.
North Tarrytown	5,421	Charles A. Benedict.
North Tonawanda	11,955	Richard A. Searing.
Norwich	7,422	Stanford J. Gibson.
Nyack	4,619	H. J. Wightman.
Ogdensburg	15,933	Francis C. Byrn.
Olean	14,743	D. F. Batcheller.
Oneida	8,317	Daniel Keating.
Oneonta	9,491	George J. Dann.
Ossining	11,480	William H. Ryan.
Oswego	23,368	Charles W. Richards.
Owego	4,633	I. S. Carroll.
Patchogue	3,824	Wellington E. Gordon.
Peekskill:		
District No. 7.	15,245	Fred J. Bohlmann.
District No. 8.		A. D. Dunbar.
Penn Yan	4,597	W. E. DeMelt.
Perry	4,388	Wm. H. McClelland.
Plattsburg	11,138	F. K. Watson.
Port Chester	12,809	Elmer S. Redman.
Port Jervis	9,564	A. H. Naylor.
Potsdam	4,036	J. M. Thompson.
Poughkeepsie	27,936	S. R. Shear.
Rensselaer	10,711	Walter S. Clark.
Rochester	218,149	H. S. West.
Rockville Center	3,367	W. S. Covert.
Rome	20,497	George R. Staley.
Rye	3,964	Forrest T. Shutts.
Sag Harbor	3,408	Theodore F. Rupp.
St Johnsville	2,536	J. Harvey Leneker.
Salamanca	5,792	A. W. Fortune.
Saranac Lake	4,983	John R. Palmer.
Saratoga Springs	12,693	Charles L. Mosher.
Saugerties	3,929	E. R. James.
Schenectady	72,826	E. R. Whitney.
Scotia	2,957	R. M. Weidler.
Seneca Falls	6,588	Frederick J. Medden
Sidney	2,507	H. Claude Hardy.
Silver Creek	2,512	Herbert E. Perkins.
Solvay	5,139	Roy B. Kelley.
Southampton	2,509	John G. Peck.
Suffern	2,663	Aretus P. Burroughs.
Syracuse	137,249	Percy M. Hughes.
Tarrytown	5,600	L. V. Case.
Tonawanda	8,290	Frank K. Sutley.
Troy:		
Union district	76,813	Arvie Eldred.
Lansingburgh district		Neil K. White.
Tuckahoe	2,722	Miss M. M. Horan.
Tupper Lake	3,067	M. A. Shaw.
Utica	74,419	John A. De Camp.
Walden	4,004	E. M. Townsend.
Walton	3,103	Clyde P. Wells.
Wappingers Falls.	3,195	J. L. Humbert.
Warsaw	3,206	George W. Glasier.
Waterford	3,245	L. W. Bills.
Waterloo	3,931	Junius D. Meeker.
Watertown	26,730	Frank S. Tisdale.
Watervliet	15,074	Hugh H. Lansing.
Watkins	2,817	John A. Beers.
Waverly	4,855	P. C. Meserve.
Wellsville	4,382	Howard G. Burdge.
Westfield	2,985	Preston K. Pattison.
Whitehall	4,917	A. J. Laidlaw.
White Plains	15,949	John W. Lumbard.
Yonkers	79,803	Charles E. Gorton.

XIII.—SUPERINTENDENTS OF PUBLIC SCHOOLS IN CITIES AND TOWNS—Contd.

City.	Population, census of 1910.	Superintendent or supervising principal.
NORTH CAROLINA.		
Asheville	18,762	Harry Howell.
Belhaven	2,863	Chas. E. Hiatt.
Burlington	4,808	C. W. Rankin.
Charlotte	34,014	H. P. Harding.
Concord	8,715	A. S. Webb.
Durham	18,241	Edwin D. Pusey.
Edenton	2,789	Joe R. Nixon.
Elizabeth City	8,412	S. L. Sheep.
Fayetteville	7,045	W. S. Snipes.
Gastonia	5,759	Joe S. Wray.
Goldsboro	6,107	C. V. Neuffer.
Graham	2,504	Fred Terrell.
Greensboro	15,895	Frederick Archer.
Greenville	4.101	H. G. Swanson.
Henderson	4.503	R. G. Kittrell.
Hendersonville	2,818	George W. Bradshaw.
Hickory	3,716	R. W. Carver.
High Point	9,525	A. A. Taylor.
Kinston	6,995	Kader R. Curtis.
Lenoir	3,364	Horace Sisk.
Lexington	4,163	J. H. Cowles.
Monroe	4.082	R. W. Allen.
Mooresville	3.400	W. C. Ariail.
Morganton	2,712	A. C. Kerley.
Mount Airy	3.811	L. M. Epps.
Newbern	9,961	H. B. Smith.
Oxford	3,018	G. B. Phillips.
Raleigh	19,218	Frank M. Harper.
Reidsville	4.828	J. H. Allen.
Rocky Mount	8,051	R. M. Wilson.
Salisbury	7.153	T. Wingate Andrews.
Shelby	3,127	I. C. Griffin.
Statesville	4,599	D. Matt. Thompson.
Tarboro	4.129	R. H. Bachman.
Thomasville	3,877	J. N. Hauss.
Washington	6,211	Frank L. Ashley.
Wilmington	25,748	Jno. J. Blair.
Wilson	6,717	Charles L. Coon.
Winston-Salem	17,167	R. H. Latham.
NORTH DAKOTA.		
Bismarck	5,443	J. M. Martin.
Devils Lake	5,157	Nelson Sauvain.
Dickinson	3,678	P. S. Berg.
Fargo	14.331	Arthur Deamer.
Grand Forks	12,478	J. Nelson Kelly.
Jamestown	4.358	Norman C. Koontz.
Mandan	3,873	C. L. Love.
Minot	6.188	L. A. White.
Valley City	4,606	G. W. Hanna.
Williston	3,124	C. E. Blume.
OHIO.		
Akron	69,067	H. V. Hotchkiss.
Alliance	15,083	B. F. Stanton.
Ashland	6,795	John A. McDowell.
Ashtabula	18,266	H. C. Dieterich.
Athens	5,463	Geoffrey F. Morgan.
Barberton	9,410	U. L. Light.
Barnesville	4,233	W. A. Zaugg.
Bellaire	12,946	J. V. Nelson.
Bellefontaine	8,238	R. J. Kiefer.
Bellevue	5,209	C. M. Carrick.
Berea	2,609	H. B. Alberty.
Bowling Green	5,222	David Bryant.
Bridgeport	3,974	S. A. Gellett.
Bryan	3,641	J. W. Wyandt.
Bucyrus	8,122	W. W. Borden.
Byesville	3,156	J. S. Talbott.
Cambridge	11,327	W. E. Arter.
Canton	50,217	Wilson Hawkins.
Celina	3,493	C. V. Sensenbaugh.
Chillicothe	14,508	F. J. Prout.
Cincinnati	363,591	Randall J. Condon.
OHIO—continued.		
Circleville	6,744	James C. Bay.
Cleveland	560,663	F. E. Spaulding.[1]
Cleveland Heights	2,955	James W. McLane.
Clyde	2,815	A. J. Love.
Columbus	181,511	John H. Francis.
Conneaut	8,319	E. D. Williamson.
Coshocton	9,603	C. E. Bryant.
Crestline	3,807	A. G. Welshimer.
Crooksville	3,028	E. D. Bates.
Cuyahoga Falls	4,020	W. H. Richardson.
Dayton	116,577	Frank W. Miller.
Defiance	7,327	E. W. Howey.
Delaware	9,076	William McK. Vance.
Delphos	5,038	Hugh R. Hick.
Dennison	4,008	W. H. Angel.
Dover	6,621	S. O. Mase.
East Cleveland	9,179	W. H. Kirk.
East Liverpool	20,387	F. P. Geiger.
East Palestine	3,537	A. D. Ladd.
East Youngstown	4,972	W. M. Coursen.
Eaton	3,187	John O'Leary.
Elmwood Place	3,423	W. S. Eversull.
Elyria	14,825	F. M. Shelton.
Findlay	14,858	I. F. Matteson.
Fostoria	9,597	F. H. Warren.
Franklin	2,659	G. H. Gerke.
Fremont	9,939	F. P. Timmons.
Galion	7,214	J. J. Phillips.
Gallipolis	5,560	O. B. Clifton.
Girard	3,736	H. L. Cash.
Glouster	2,527	M. O. Davis.
Greenfield	4,228	E. W. Patterson.
Greenville	6,237	Minor McCool.
Hamilton	35,279	Darrell Joyce.
Hillsboro	4,296	O. C. Jackson.
Ironton	13,147	C. E. McCorkle.
Jackson	5,468	James Edgar Kinnison.
Kent	4,488	Forrest B. Bryant.
Kenton	7,185	N. E. Hutchinson.
Lakewood	15,181	C. P. Lynch.
Lancaster	13,093	J. R. Clements.
Lebanon	2,698	C. A. Bruner.
Leetonia	2,665	W. E. Pfeister.
Lima	30,508	J. E. Collins.
Lisbon	3,084	Wm. H. Geiger.
Lockland	3,439	A. L. Heer.
Logan	4,850	L. I. Morse.
London	3,530	W. H. Rice.
Lorain	28,883	D. J. Boone.
Mansfield	20,768	H. H. Helter.
Marietta	12,923	B. O. Skinner.
Marion	18,232	Henry A. Hartman.
Martins Ferry	9,133	W. A. Walls.
Marysville	3,576	L. B. Demorest.
Massillon	13,879	Lewis Edwin York.
Medina	2,734	W. E. Conkle.
Miamisburg	4,271	Harris V. Bear.
Middleport	3,194	A. W. McKay.
Middletown	13,152	R. W. Solomon.
Mingo Junction	4,049	Frank Linton.
Montpelier	2,739	G. W. Hoffman.
Mount Vernon	9,087	P. C. Zemer.
Napoleon	4,007	W. R. Ash.
Nelsonville	6,082	D. A. Ferree.
Newark	25,404	O. J. Barnes.
Newcomerstown	2,943	R. M. Marlowe.
New Lexington	2,559	J. E. Way.
New Philadelphia	8,512	Charles F. Limbach
Niles	8,361	W. C. Campbell.
North Baltimore	2,503	J. O. Grimes.
Norwalk	7,858	C. C. Patterson.
Norwood	16,185	W. S. Cadman.
Oberlin	4,365	Howard L. Rawdon
Orrville	3,101	M. C. Avery.
Painesville	5,501	C. C. Underwood.

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[1] Absent on leave. R S. Jones, acting.

I.—SUPERINTENDENTS OF PUBLIC SCHOOLS IN CITIES AND TOWNS—Contd.

ity.	Population, census of 1910.	Superintendent or supervising principal.
contd.		
	13,388	George C. Dietrich.
y	4,023	C. T. Coates.
nton	3,007	J. O. Grimes.
uth	23,481	Frank Appel.
a	5,310	E. O. Trescott.
	3,985	J. B. Britton.
ard	5,002	J. L. Trisler.
ys	5,732	C. C. McBroom.
	8,943	John S. Alan.
y	19,989	Walter S. Edmund.
	4,903	W. H. Maurer.
	6,607	Herbert R. McVay.
eld	46,921	George E. McCord.
ille	22,391	Robert L. Erwin.
rs	3,370	W. P. Moody.
	11,894	Charles A. Krout.
	168,497	William B. Guitteau.
	4,271	S. C. Dennis.
	6,122	Charles W. Cookson.
ville	4,731	L. E. Everett.
Sandusky	3,779	E. H. Brown.
	7,739	I. N. Keyser.
rt	7,157	David B. Clark.
rth	3,073	A. W. Elliott.
neta	5,349	F. E. Reynolds.
	11,081	H. B. Turner.
gton C. H.	7,277	William McClain.
n	2,650	M. L. Altstetter.
n	6,875	S. H. Maharry.
lle	7,769	A. D. Horton.
ark	3,179	T. J. Williams.
	2,950	W. C. Kramer.
gton	4,491	E. P. West.
eld	2,502	R. C. Maston.
r	6,136	George C. Maurer.
	8,706	J. R. Patterson.
town	79,066	N. H. Chaney.
lle	28,026	F. C. Kirkendall.
AHOMA.		
	4,349	J. E. Hickman.
	4,821	W. H. Decker.
	3,688	Albert W. Fanning.
ko	3,439	W. H. Bishop.
e	8,618	C. W. Richards.
ville	6,181	F. W. Wenner.
ell	3,266	A. J. Lovett.
ha	10,320	William F. Ramey.
re	2,866	Mrs. Mary A. Davis.
	2,781	E. H. Hornberger.
s	3,255	A. P. Lever.
	5,330	George C. Rorie.
y	3,165	Arthur L. Richards.
o	7,872	C. E. Grady.
	13,799	E. D. Price.
k	3,027	J. O. Shaw.
	11,654	H. T. Flaugher.
rne	2,963	F. L. Stamps.
	3,845	T. E. Bartlett.
	4,582	H. G. Bennett.
er	2,538	J. E. Arendell.
	2,884	W. A. Stackable.
	7,788	Hugh A. Carroll.
er	12,954	W. G. Masterson.
n	3,667	M. P. Smith.
	2,907	M. R. Floyd.
ee	25,278	Edwin S. Monroe.
	3,724	N. H. Edwards.
	3,672	H. C. Fisk.
na	64,205	J. A. Whiteford.
ee	4,176	H. B. Bruner.
alley	2,689	John T. Butcher.
ka	2,776	Wm. M. Sinclair.
	3,133	A. I. Fleming.
ity	2,521	J. N. Hamilton.
	2,740	S. C. Herrin.

City.	Population, census of 1910.	Superintendent or supervising principal.
OKLAHOMA—con.		
Sapulpa	8,283	E. B. Gardner.
Shawnee	12,474	Hugh G. Faust.
Stillwater	3,444	Ed McCarrel.
Sulphur	3,684	A. C. Floyd.
Tahlequah	2,891	W. T. Scott.
Tulsa	18,182	E. E. Oberholtzer.
Vinita	4,082	C. N. Peak.
Wagoner	4,018	George M. Rydre.
Waurika	2,928	D. T. Smith.
Woodward	2,696	J. W. Tyler.
OREGON.		
Albany	4,275	C. W. Boetticher.
Ashland	5,020	Geo. A. Briscoe.
Astoria	9,599	H. L. Hussong.
Baker	6,742	A. C. Strange.
Corvallis	4,552	J. O. McLaughlin.
Eugene	9,009	W. R. Rutherford.
Grants Pass	3,897	J. G. Imel.
Klamath Falls	2,758	R. H. Dunbar.
La Grande	4,843	A. C. Hampton.
Marshfield	2,980	F. A. Tiedgen.
Medford	8,840	Wm. Davenport.
Oregon City	4,287	F. J. Tooze.
Pendleton	4,460	Fred P. Austin.
Portland	207,214	D. A. Grout.
Roseburg	4,738	Aubrey G. Smith.
Salem	14,094	J. W. Todd.
The Dalles	4,880	R. L. Kirk.
PENNSYLVANIA.		
Allentown	51,913	H. W. Dodd.
Altoona	52,127	S. H. Layton.
Ambler	2,649	J. M. Fisher.
Ambridge	5,205	Chas. S. McVay.
Apollo	3,006	Grace Watt.
Archbald	7,191	W. A. Kelly.
Ashland	6,855	J. C. Weirick.
Ashley	5,601	A. P. Cope.
Aspinwall	2,592	F. D. Kebock.
Athens	3,796	William F. Yoder.
Austin	2,941	H. E. Stover.
Avalon	4,317	S. Todd Perley.
Avoca	4,634	Charles Webber.
Bangor	5,369	J. W. Gruver.
Barnesboro	3,535	G. W. Stephens.
Beaver	3,456	Jonas E. Wagoner.
Beaver Falls	12,191	Floyd Atwell.
Bellefonte	4,145	Arthur H. Sloop.
Bellevue	6,323	T. E. Garber.
Berwick	5,357	J. Y. Shambach.
Bethlehem	32,810	James N. Muir.
Birdsboro	2,930	A. M. Hinkel.
Blairsville	3,572	Harry E. Seville.
Blakely (P. O., Peckville).	5,345	H. B. Anthony.
Bloomsburg	7,413	L. P. Sterner.
Brackenridge	3,134	Venetta J. Travis
Braddock	19,357	F. C. Steltz.
Bradford	14,544	J. F. Butterworth.
Bridgeport	3,860	H. E. James.
Bristol	9,256	Louise D. Baggs.
Brookville	3,003	H. R. Loeser.
Butler	20,728	John A. Gibson.
Canonsburg	3,891	F. W. McVay.
Carbondale	17,040	Wm. C. Greenawalt.
Carlisle	10,303	John C. Wagner.
Carnegie	10,009	Thomas J. George.
Carrick (P. O., Pittsburgh).	6,117	W. H. Sprenkle
Catasaqua	5,250	H. J. Reinhard.
Chambersburg	11,800	U. L. Gordy.
Charleroi	9,615	Thomas L. Pollock.
Chester	38,537	Charles A. Wagner
Clairton	3,326	F. N. Frits.

XIII.—SUPERINTENDENTS OF PUBLIC SCHOOLS IN CITIES AND TOWNS—Contd.

City.	Population, census of 1910.	Superintendent or supervising principal.
PENNSYLVANIA—continued.		
Clarion	2,612	W. W. Eisenhart.
Clearfield	6,851	George E. Zerfoss.
Clifton Heights	3,155	Sarah Edwards.
Coaldale	5,154	Jno. E. Gildea.
Coatesville	11,084	H. R. Vanderslice.
Columbia	11,454	Wm. C. Sampson.
Connellsville	12,845	Stanley P. Ashe.
Conshohocken	7,480	A. M. Weaver.
Coplay	2,670	Wm. Shetlock.
Coraopolis	5,252	C. E. Hilborn.
Corry	5,991	Charles Nagle.
Coudersport	3,100	L. G. Soper.
Crafton	4,583	J. W. Rutherford.
Curwensville	2,549	R. A. Shields.
Danville	7,517	D. N. Dieffenbacher.
Darby	6,305	Amos Chamberlain.
Derry	2,954	J. C. Bryson.
Dickson City	9,331	P. M. Brennan.
Donora	8,174	T. M. Gilland.
Dorranceton (P. O., Wilkes-Barre).	4,046	C. B. Hanyen, jr.
Downingtown	3,326	A. B. Moyer.
Doylestown	3,304	Carmon Ross.
Dubois	12,623	T. T. Allen.
Dunmore	17,615	C. F. Hoban.
Duquesne	15,727	C. H. Wolford.
Duryea	7,487	F. J. Regan.
East Conemaugh	5,046	J. M. Uhler.
East Mauch Chunk.	3,548	P. H. McCabe.
Easton	28,523	Robert E. Laramy.
East Pittsburgh	5,615	H. L. Koons.
East Stroudsburg	3,330	Charles A. Goss.
Edgewood	2,596	Frank H. Remaley.
Edwardsville (P. O., Wilkes-Barre).	8,407	James O. Herman.
Elizabethtown	2,587	E. U. Aumiller.
Elwood City	3,902	Charles F. Becker.
Emaus	3,501	Howard C. Snyder.
Emporium	2,916	R. W. Clawges.
Ephrata	3,192	Guy K. Bard.
Erie	66,525	I. B. Bush.
Etna (P. O., Pittsburgh).	5,830	E. S. Rice.
Exeter (P. O., Pittston).	3,537	Elizabeth Dougher.
Farrell	10,190	Port Eckles.
Ford City	4,850	W. W. Irwin.
Forest City	5,749	Elmer Jones.
Frackville	3,118	W. R. Trautman.
Franklin	9,767	C. E. Carter.
Freedom	3,060	F. A. Barkley.
Freeland	6,197	N. P. Luckenbill.
Galeton	4,027	R. R. Merrill.
Gallitzin	3,504	R. H. Biter.
Gettysburg	4,030	Helen L. Cope.
Gilberton	5,401	Joseph O. Boyle.
Girardville	4,396	H. E. Anderson.
Glassport	5,540	John S. Hart.
Greensburg	13,012	Thos. S. March.
Greenville	5,909	G. B. Gerberich.
Grove City	3,674	H. M. B. Lehn.
Hanover	7,057	A. J. English.
Harrisburg	64,186	Frederick E. Downes.
Hazleton	30,167	D. A. Harman.
Hollidaysburg	3,734	H. J. Barrett.
Homestead	18,713	Landis Tanger.
Honesdale	2,945	Russell T. Davies.
Huntingdon	6,861	E. R. Barclay.
Indiana	5,749	Harry V. Herlinger.
Irwin	2,886	Samuel Fausold.
Jeannette	8,077	E. W. Long.
Jenkintown	2,968	B. A. Kline.
Jermyn	3,158	William M. Behler.
PENNSYLVANIA—continued.		
Jersey Shore	5,381	J. G. Dundore.
Johnsonburg	4,334	S. M. Robb.
Johnstown	55,482	H. J. Stockton.
Juniata	5,285	M. B. Wineland.
Kane	6,626	H. O. Dietrich.
Kingston	6,449	J. Richmond Merkel.
Kittanning	4,311	Ira M. Gast.
Knoxville	5,651	A. R. Gilbert.
Lancaster	47,227	H. B. Work.
Lansdale	3,551	J. Walter Gapp.
Lansdowne	4,066	Walter L. Philips.
Lansford	8,323	Elmer E. Kuntz.
Larksville (P. O., Wilkes-Barre).	9,288	M. L. McCann.
Latrobe	8,777	R. M. Steele.
Lebanon	19,240	E. M. Balsbaugh.
Leechburg	3,624	S. M. Neagley.
Lehighton	5,316	B. M. Shull.
Lewisburg	3,081	H. S. Bourne.
Lewistown	8,166	W. A. Hutchinson.
Lockhaven	7,772	Clement W. Hunt.
Luzerne	5,426	Theron G. Osborne.
Lykens	2,943	C. H. Auman.
McAdoo	3,389	A. T. O'Donnell.
McDonald	2,543	N. G. Parke.
McKeesport	42,694	Jos. B. Richey.
McKees Rocks	14,702	T. K. Johnston.
Mahanoy City	15,936	H. A. O'Day.
Mauch Chunk	3,952	E. P. Heckert.
Mayfield	3,662	A. L. McCarthy.
Meadville	12,780	Edw. Sargent.
Mechanicsburg	4,469	Ralph Jacoby.
Media	3,562	William C. Joslin.
Meyersdale	3,741	W. H. Kretchman.
Middletown	5,374	H. J. Wickey.
Millvale	7,861	C. C. Williamson.
Milton	7,460	
Miners Mills (P. O., Wilkes-Barre).	3,159	John J. Gallagher.
Minersville	7,240	Chas. F. Roudabush.
Monaca	3,376	Geo. L. Hayes.
Monessen	11,775	H. E. Gress.
Monongahela	7,598	Renwick G. Dean.
Moosic	3,964	Irvin D. Ritter.
Mount Carmel	17,532	Wilbur M. Yeingst.
Mount Oliver	4,241	Minnie Ubinger.
Mount Pleasant	5,812	H. H. De Long.
Mount Union	3,338	W. P. Harley.
Munhall	5,185	Charles R. Stone.
Nanticoke	18,877	A. P. Duffendafer.
Nazareth	3,978	Frederick A. Marcks.
New Brighton	8,329	S. W. Lyons.
New Castle	36,280	George A. Dickson.
New Kensington	7,707	Berlin Empfield.
Norristown	27,875	Allen S. Martin.
Northampton	8,729	William D. Landis.
North Braddock	11,824	H. H. Means.
North East	2,672	W. J. McQuiston.
Northumberland	3,517	Myron Geddes.
Oakmont	3,436	W. Lee Gilmore.
Oil City	15,657	James J. Palmer.
Old Forge	11,324	Frank R. Coyne.
Olyphant	8,505	M. W. Cummings.
Parkesburg	2,522	L. R. Coll.
Parnassus	2,578	R. S. Penfield.
Parsons	4,338	E. A. Evans.
Patton	3,907	William Bosserman.
Pen Argyl	3,967	Herbert F. Arnold.
Perkasie	2,779	Lewis H. Wagenhorst.
Philadelphia	1,549,008	John P. Garber.
Philipsburg	3,585	J. S. F. Ruthrauff.
Phoenixville	10,743	Isaac Doughton.
Pitcairn	4,975	C. G. Pierce.
Pittsburgh	533,905	Wm. M. Davidson.
Pittston	16,267	D. J. Cray.

XIII.—Superintendents of Public Schools in Cities and Towns—Contd.

City.	Population, census of 1910.	Superintendent or supervising principal.
PENNSYLVANIA—continued.		
Plymouth	16,996	S. L. Smith.
Portage	2,954	C. F. Helt.
Port Carbon	2,678	Ira A. Goss.
Pottstown	15,599	W. W. Rupert.
Pottsville	20,236	G. H. Weiss.
Punxsutawney	9,058	Frank S. Jackson.
Quakertown	3,801	Carl G. Leech.
Rankin (P. O. Braddock).	6,042	C. L. Wilson.
Reading	96,071	Charles S. Foos.
Renovo	4,621	Geo. A. Mincemoyer.
Reynoldsville	3,189	G. C. Moore.
Ridgway	5,408	W. M. Peirce.
Rochester	5,903	S. R. Grimm.
Royersford	3,073	J. A. Uhland.
St. Clair (P. O. Mount Oliver).	5,640	
St. Clair (Schuylkill County).	6,455	Thomas G. Jones.
St. Marys	6,346	J. J. Lynch.
Sayre	6,426	L. Edwin De Laney.
Schuylkill Haven	4,747	T. A. Hoover.
Scottdale	5,456	J. N. Wangaman.
Scranton	129,867	Samuel E. Weber.
Sewickley	4,479	George E. Mark.
Shamokin	19,588	Joseph Howerth.
Sharon	15,270	W. D. Gamble.
Sharpsburg	8,153	John J. Donovan.
Sharpsville	3,634	Wm. M. Johnston.
Shenandoah	25,774	J. W. Cooper.
Shippensburg	3,457	A. Lee Shulenberger.
Silver Creek	2,512	P. S. Canfield.
Slatington	4,454	J. W. Snyder.
Somerset	2,612	F. F. Foltz.
South Brownsville.	3,943	D. D. Watkins.
South Fork	4,592	W. C. Crawford.
South Williamsport.	3,734	A. B. Elder.
Spangler	2,700	T. J. Sullivan.
Spring City	2,880	W. F. De Turck.
Steelton	14,246	L. F. McGinnes.
Stroudsburg	4,379	Robert Brown, jr.
Summit Hill	4,209	H. D. Levengood.
Sunbury	13,770	Walter A. Geesey.
Susquehanna	3,478	A. A. Killian.
Swissvale	7,381	C. C. Kelso.
Swoyersville (P. O. Wilkes-Barre)	5,396	Joseph H. Finn.
Tamaqua	9,462	J. F. Derr.
Tarentum	7,414	A. D. Endsley.
Taylor	9,060	William S. Robinson.
Throop	5,133	John J. O'Hara.
Titusville	8,533	Henry Pease.
Towanda	4,281	F. A. Quackenbush.
Turtle Creek	4,995	W. A. Rodgers.
Tyrone	7,176	F. M. Halston.
Union City	3,684	M. J. Blanden.
Uniontown	13,344	J. H. Alleman.
Vandergrift	7,314	Chas. H. Umo.
Verona	2,849	U. G. Palmer.
Warren	11,080	R. T. Adams.
Washington	18,778	J. C. Stiers.
Waynesboro	7,199	J. Clair McCullough.
Waynesburg	3,545	R. M. Archibald.
Weatherly	2,501	H. Arthur Fox.
Wellsboro	3,183	R. L. Butler.
West Chester	11,767	Addison L. Jones.
West Homestead (P. O. Homestead).	3,009	F. L. Rose.
West Newton	2,880	F. H. Painter.
West Pittston	6,848	L. P. Bierly.
Wilkes-Barre	67,105	H. H. Zeiser.
Wilkinsburg	18,924	James L. Allison.
Williamsport	31,860	F. W. Robbins.
Williamstown	2,904	Ira C. Mummert.
Wilmerding	6,133	Chas. W. Shaffer.
Windber	8,013	W. W. Lantz.
Winton	5,280	J. J. Judge.
Wyoming	3,010	John E. Pratt.
York	44,750	A. Wanner.
PHILIPPINE ISLANDS.		
Manila	234,400	Jas. F. Scouller.
RHODE ISLAND.[1]		
Bristol	8,565	T. H. De Coudres.
Burrillville (P. O. Harrisville).	7,878	Joseph C. Sweeney.
Central Falls	22,754	Robert K. Bennett.
Coventry	5,848	Henry M. Walradt.
Cranston (P. O. Providence).	21,107	John K. Fenner.
Cumberland (P. O. Manville).	10,107	George W. Morris.
East Greenwich	3,420	Irving C. Phillips.
East Providence	15,808	J. R. D. Oldham.
Johnston (P. O. Providence).	5,935	George F. Weston.
Lincoln (P. O. Central Falls).	9,825	John L. Smith.
Newport	27,149	Herbert W. Lull.
North Kingston	4,048	John P. Fogwell.
North Providence	5,407	August Berau.
North Smithfield (P. O. Woonsocket).	2,699	Edgar F. Hamlin.
Pawtucket	51,622	Frank O. Draper.
Portsmouth	2,681	Isabella G. Chase.
Providence	224,326	Isaac O. Winslow.
Scituate	3,493	I. C. Phillips.
Smithfield	2,739	Clovis W. Mitchell.
South Kingston	5,176	William A. Brady.
Tiverton	4,032	Grace M. Coyne.
Warren	6,585	Leroy G. Staples.
Warwick	26,629	William F. Miner.
Westerly	8,696	Willard H. Bacon.
West Warwick	(2)	John F. Deering.
Woonsocket	38,125	Wendell A. Mowry.
SOUTH CAROLINA.		
Abbeville	4,459	D. R. Riser.
Aiken	3,911	W. Jay McGarity.
Anderson	9,654	E. C. McCants.
Bennettsville	2,646	K. D. Senn.
Camden	3,569	J. G. Richards, jr.
Charleston	58,833	A. B. Rhett.
Cheraw	2,873	S. A. Merchant.
Chester	4,754	W. H. McNairy.
Clinton	3,272	A. C. Daniel.
Columbia	26,319	W. H. Hand.
Darlington	3,789	J. C. Daniel.
Easley	2,983	Geo. W. Coggin.
Florence	7,057	W. L. Brooker.
Gaffney	4,767	J. H. Witherspoon.
Georgetown	5,530	Wm. C. Bynum.
Greenville	15,741	J. L. Mann.
Greenwood	6,614	W. W. Nickels.
Laurens	4,818	Joseph T. Spears.
Marion	3,844	T. C. Easterling.
Newberry	5,028	O. B. Cannon.
Orangeburg	5,906	A. J. Thackston.

[1] For other Rhode Island superintendents see p. 65.

[2] Part of Warwick in 1910.

XIII.—SUPERINTENDENTS OF PUBLIC SCHOOLS IN CITIES AND TOWNS—Contd.

City.	Population, census of 1910.	Superintendent or supervising principal.
SOUTH CAROLINA—continued.		
Rock Hill	7,216	R. C. Burts.
Spartanburg	17,517	Frank Evans.
Sumter	8,109	S. H. Edmunds.
Union	5,623	Davis Jeffries.
SOUTH DAKOTA.		
Aberdeen	10,753	Jos. T. Glenn.
Brookings	2,971	S. E. Hargis.
Deadwood	3,653	H. Nienhuis.
Huron	5,791	Bruce Francis.
Lead	8,392	F. A. Henderson.
Madison	3,137	June Emry.
Mitchell	6,515	J. C. Lindsey.
Pierre	3,656	R. E. Rawlins.
Rapid City	3,854	Robert B. Irons.
Redfield	3,060	Carl M. Bair.
Sioux Falls	14,094	A. A. McDonald.
Watertown	7,010	T. A. Harmon.
Yankton	3,787	Claude W. Street.
TENNESSEE.		
Bristol	7,184	Ralph B. Rubins.
Chattanooga	44,604	C. H. Winder.
Clarksville	8,548	A. J. Smith.
Cleveland	5,549	D. C. Arnold.
Columbia	5,754	R. L. Harris.
Covington	2,990	B. O. Duggan.
Dyersburg	4,149	Walter M. Campbell.
Fayetteville	3,439	Geo. C. Simmons.
Franklin	2,924	R. V. Kennedy.
Harriman	3,061	Dudley S. Tanner.
Humboldt	3,446	H. H. Ellis.
Jackson	15,779	Charles E. Dryden.
Johnson City	8,502	D. M. Andrews.
Knoxville	36,346	W. E. Miller.
Lafollette	2,816	P. W. Kerr.
Lebanon	3,659	W. L. Harris.
Lenoir City	3,392	J. H. Jarvis.
Memphis	131,105	Wharton S. Jones.
Morristown	4,007	C. C. Sherrod.
Murfreesboro	4,679	J. C. Mitchell.
Nashville	110,364	H. C. Weber.
Paris	3,881	M. M. Phillips.
Pulaski	2,928	F. E. Ranck.
Rockwood	3,660	N. A. Steadman.
Shelbyville	2,869	R. T. Allen.
Tullahoma	3,049	T. J. Dotson.
Union City	4,387	A. C. Nute.
TEXAS.		
Abilene	9,204	R. D. Green.
Amarillo	9,957	M. H. Duncan.
Austin	29,860	A. N. McCallum.
Ballinger	3,536	J. M. Skinner.
Bay City	3,156	D. R. Hibbetts.
Beaumont	20,640	H. F. Triplett.
Beeville	3,269	W. E. Madderra.
Belton	4,164	L. H. Hubbard.
Big Spring	4,102	M. H. Brasher.
Bonham	4,844	H. D. Fillers.
Bowie	2,874	T. P. Walker.
Brady	2,669	W. L. Hughes.
Brenham	4,718	Joseph C. Tucker.
Brownsville	10,517	Lizzie M. Barbour.
Brownwood	6,967	J. W. Page.
Bryan	4,132	W. C. Lawson.
Calvert	2,579	H. F. Saunders.
Cameron	3,203	J. E. Watts.
Childress	3,818	B. M. Harrison.
Cleburne	10,364	Emmett Brown.
Coleman	3,046	C. H. Hufford.
Comanche	2,756	R. F. Holloway.
Commerce	2,818	A. L. Day.
TEXAS—contd.		
Corpus Christi	8,222	W. D. Notley.
Corsicana	9,749	J. E. Blair.
Crockett	3,947	Donald McDonald.
Cuero	3,109	A. S. Bush.
Dalhart	2,580	J. A. Webb.
Dallas	92,104	J. F. Kimball.
Denison	13,632	Frank B. Hughes.
Denton	4,732	J. W. Beaty.
Dublin	2,551	S. L. Wolfe.
Eagle Pass	3,536	G. B. M. Snyder.
El Paso	39,279	R. J. Tighe.
Ennis	5,669	J. D. Cochlan.
Fort Worth	73,312	M. H. Moore.
Gainesville	7,624	O. E. Perris.
Galveston	36,981	John W. Hopkins.
Georgetown	3,096	M. A. Cannon.
Gonzales	3,139	K. A. Jones.
Greenville	8,850	L. C. Gee.
Hillsboro	6,115	W. T. Lofland.
Houston	78,800	P. W. Horn.
Houston Heights	6,984	S. P. Waltrip.
Jacksonville	2,875	B. M. Gramling.
Jefferson	2,515	A. E. Day.
Laredo	14,855	L. J. Christen.
Lockhart	2,945	T. A. Fisher.
Longview	5,155	S. J. Blocher.
Lufkin	2,749	I. A. Coston.
McKinney	4,714	J. S. Carlisle.
Marlin	3,878	A. C. Ferguson.
Marshall	11,452	J. P. Glasgow.
Mart	2,939	J. G. Toland.
Mexia	2,694	Frederick B. Elliott.
Mineral Wells	3,950	E. O. McNew.
Mount Pleasant	3,137	A. V. Peterson.
Nacogdoches	3,369	R. F. Davis.
Navasota	3,284	J. T. Davis.
New Braunfels	3,165	B. Holekamp.
Orange	5,527	E. B. Stover.
Palestine	10,482	Luther B. Gill.
Paris	11,269	J. G. Wooten.
Plainview	2,829	H. P. Webb.
Port Arthur	7,663	G. M. Sims.
Quanah	3,127	J. W. O'Banion.
San Angelo	10,321	Felix E. Smith.
San Antonio	96,614	Charles S. Meek.
San Marcos	4,071	E. M. Day.
Seguin	3,116	R. E. L. Adams.
Sherman	12,412	J. C. Pyle.
Smithville	3,167	L. W. Land.
Snyder	2,514	S. L. Rieves
Stamford	3,902	J. W. Teasley.
Stephenville	2,561	Henry Sims
Sulphur Springs	5,151	F. V. Garrison.
Sweetwater	4,176	D. A. Clark.
Taylor	5,314	J. E. Watts.
Teague	3,288	J. D. Bramlette.
Temple	10,993	W. W. Clement.
Terrell	7,050	S. M. N. Marrs.
Texarkana	9,790	Geo. H. Carpenter.
Tyler	10,400	T. H. Shelby.
Uvalde	3,998	A. W. Evans.
Vernon	3,195	B. F. Sisk.
Victoria	3,673	V. L. Griffin.
Waco	26,425	B. B. Cobb.
Waxahachie	6,205	G. B. Winn.
Weatherford	5,074	T. W. Stanley.
Wichita Falls	8,200	Lee Clark
Yoakum	4,657	J. H. Burnett.
UTAH.		
American Fork	2,797	James H. Walker.
Bingham	2,881	Lars W. Nielsen.
Brigham	3,685	C. H. Skidmore.
Eureka	3,416	I. L. Williamson.
Lehi	2,964	A. F. Yates.
Logan	7,522	Henry Peterson.

I.—Superintendents of Public Schools in Cities and Towns—Contd.

ity.	Population, census of 1910.	Superintendent or supervising principal.
—contd.		
	4,057	C. E. Gaufin.
	2,759	Ray Stewart.
	25,580	Henry C. Johnson.
ity	3,439	James L. Kearns.
	8,925	L. E. Eggertsen.
ld	2,559	Jos. A. Anderson.
ke City	92,777	Ernest A. Smith.
Fork	3,464	J. Preston Creer.
ille	3,356	
	2,753	J. U. Hicks.
MONT.[1]		
	10,734	Carroll H. White.
	3,346	C. L. Erwin.
s Falls	4,883	(See Rockingham.)
gton	8,698	A. W. Varney.
n	2,712	M. A. Sturtevant.
boro	7,541	Florence M. Wellman.
ton	20,468	Merritt D. Chittenden.
ki	4,520	George R. Stackpole.
	3,629	E. A. Hamilton.
	2,714	Minnie E. Hays.
ven	3,095	W. H. Hosmer.
ick	3,201	C. L. Cowles.
d	4,179	Nelson J. Whitehill.
n	3,204	M. E. Daniels.
ury	2,848	Arthur W. Eddy.
lier	7,856	S. C. Hutchinson.
own (P. O. sville).	2,652	Carlton D. Howe.
rt	3,084	E. A. Hamilton.
eld	3,228	J. Allen Hunter.
y	3,044	W. H. Hosmer.
	2,871	W. A. Beebe.
ph	3,191	George W. Patterson.
d	2,907	Edwin F. Greene.
gham(P.O. ws Falls).	6,207	W. C. McGinnis.
d	13,546	David B. Locke.
ans	6,381	George S. Wright.
nsbury	8,098	Walter H. Young.
ield	4,784	Herbert D. Casey.
n	3,628	Homer E. Hunt.
ury	3,273	Martin W. Chaffee.
utland	3,427	Philip R. Leavenworth.
ock	2,545	Everett V. Perkins.
GINIA.		
dria	15,329	W. H. Sweeney.
l	2,508	C. M. Abbot.
ne Gap	2,590	Owen R. Easley.
	6,247	F. B. Fitzpatrick.
Vista	3,245	J. P. McCluer.
tesville	6,765	James G. Johnson.
Forge	5,748	R. C. Bowton.
on	4,234	J. G. Jeter.
e	19,020	F. H. Wheatley.
lle	2,971	P. T. Atkinson.
cksburg	5,874	E. F. Birckhead.
on	5,505	J. M. Willis.
nburg	4,879	W. H. Keister.
on	2,931	Harrington Waddell.
urg	29,494	E. C. Glass.
	2,727	B. E. Copenhaver.
ville	3,368	W. B. Gates.
t News	20,205	D. A. Dutrow.
	67,452	Richard A. Dobie.
urg	24,127	Frank M. Martin.
outh	33,190	H. A. Hunt.
	4,807	E. L. Darst.

City.	Population, census of 1910.	Superintendent or supervising principal.
VIRGINIA—contd.		
Radford	4,202	J. P. Whitt.
Richmond	127,628	J. A. C. Chandler.
Roanoke	34,874	D. E. McQuilkin.
Salem	3,849	R. E. Cook.
South Boston	3,516	H. J. Watkins.
Staunton	10,604	J. P. Neff.
Suffolk	7,008	Jos. L. Bell.
Williamsburg	2,714	H. W. Vaden.
Winchester	5,864	Leslie D. Kline.
Wytheville	3,054	J. A. C. Hurt.
WASHINGTON.		
Aberdeen	13,660	Geo. B. Miller.
Anacortes	4,168	W. A. Jennings.
Bellingham	24,298	Elmer L. Cave.
Bremerton	2,993	V. D. Goss.
Centralia	7,311	Edgar Reed.
Chehalis	4,507	R. E. Cook.
Cle Elum	2,749	G. I. Wilson.
Colfax	2,783	J. O. Mattoon.
Ellensburg	4,209	Linden McCullough.
Everett	24,814	A. C. Roberts.
Hillyard	3,276	Thomas Cahill.
Hoquiam	8,171	F. E. Schmidtke.
Olympia	6,996	Chauncey E. Beach.
Port Townsend	4,181	H. R. Taylor.
Pullman	2,602	J. W. Graham.
Puyallup	4,544	E. B. Walker.
Renton	2,740	F. S. Salisbury.
Roslyn	3,126	W. G. Whitfield.
Seattle	237,194	Frank B. Cooper.
Snohomish	3,244	C. W. Hodge.
South Bend	3,023	Jos. R. McOrdle.
Spokane	104,402	Orville C. Pratt.
Tacoma	83,743	Wm. F. Geiger.
Vancouver	9,300	C. W. Shumway.
Walla Walla	19,364	W. M. Kern.
Wenatchee	4,050	Guy W. Bohannan.
Yakima	14,082	A. C. Davis.
WEST VIRGINIA.		
Benwood	4,976	Floyd Hanifan.
Bluefield	11,188	Edwin C. Wade.
Charleston	22,996	Geo. S. Laidley.
Charles Town	2,662	Wright Denny.
Chester	3,184	Elmer E. Oldaker.
Clarksburg	9,201	J. A. Jackson.
Davis	2,615	C. F. Lee.
Elkins	5,260	W. W. Trent.
Fairmont	9,711	Otis G. Wilson.
Grafton	7,563	L. W. Burns.
Hinton	3,656	H. F. Griffey.
Huntington	31,161	C. L. Wright.
Keyser	3,705	J. C. Sanders.
McMechen	2,921	Floyd Hanifan.
Mannington	2,672	David A. Ward.
Martinsburg	10,698	Wm. C. Morton.
Morgantown	9,150	R. C. Smith.
Moundsville	8,918	H. V. Merrick.
Parkersburg	17,842	H. E. Odgers.
Princeton	3,027	J. N. Hoyman.
Richwood	3,061	A. F. Shroyer.
Sistersville	2,684	W. W. Strain.
Wellsburg	4,189	W. N. Beetham.
Wheeling	41,641	C. E. Githens.
Williamson	3,561	A. C. Davis.
WISCONSIN.		
Antigo	7,196	Ernest Ller.
Appleton	16,773	Carrie E. Morgan.
Ashland	11,594	V. T. Thayer.
Baraboo	6,324	A. C. Kingsford.
Beaver Dam	6,758	George R. Ray.

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[1] For other Vermont superintendents, see pp. 69–70.

XIII.—SUPERINTENDENTS OF PUBLIC SCHOOLS IN CITIES AND TOWNS—Contd.

City.	Population, census of 1910.	Superintendent or supervising principal.
WISCONSIN—con.		
Beloit	15,125	F. E. Converse.
Berlin	4,636	F. Stanley Powles.
Burlington	3,212	Fred. L. Witter.
Chippewa Falls	8,893	Geo. O. Banting.
Columbus	2,523	John Dixon.
Cudahy	3,691	Jesse F. Cory.
De Pere	4,477	A. L. Simon.
Eau Claire	18,310	W. A. Clark.
Edgerton	2,513	F. O. Holt.
Fond du Lac	18,797	J. E. Roberts.
Fort Atkinson	3,877	E. H. Miles.
Grand Rapids	6,521	E. G. Doudna.
Green Bay	25,236	A. W. Burton.
Hartford	2,982	Charles H. Karch.
Hudson	2,810	Ira O. Hubbard.
Janesville	13,894	H. H. Faust.
Jefferson	2,582	Will G. Ballentine.
Kaukauna	4,717	Leo G. Schussmann.
Kenosha	21,371	Mrs. Mary D. Bradford.
La Crosse	30,417	B. E. McCormick.
Lake Geneva	3,079	J. M. Beck.
Madison	25,531	R. B. Dudgeon.
Manitowoc	13,027	P. J. Zimmers.
Marinette	14,610	G. H. Landgraf.
Marshfield	5,783	D. S. Miller.
Menasha	6,081	O. H. Plenzke.
Menomonie	5,036	E. W. Waite.
Merrill	8,689	H. W. Kircher.
Milwaukee	373,857	Milton C. Potter.
Mineral Point	2,925	W. R. Rood.
Monroe	4,410	Paul F. Neverman.
Neenah	5,734	C. F. Hedges.
New London	3,383	W. S. Ford.
Oconomowoc	3,054	Fred J. Holt.
Oconto	5,629	E. F. Strong.
Oshkosh	33,062	M. N. MacIver.
Platteville	4,452	F. V. Powell.
Plymouth	3,094	C. A. Rubado.
Portage	5,440	C. C. Bishop.
Port Washington:		
District No. 1.	3,792	Joseph E. Barber.
District No. 4.		Earl Wiesler.
WISCONSIN—con.		
Prairie du Chien	3,149	Nicholas Gunderson.
Racine	38,002	F. M. Longanecker.
Reedsburg	2,615	A. B. Olson.
Rhinelander	5,637	W. P. Colburn.
Rice Lake	3,968	Henry J. Stoeps.
Richland Center	2,652	John P. Ballantyne.
Ripon	3,739	L. P. Goodrich.
Shawano	2,923	Fred G. Bishop.
Sheboygan	26,398	W. P. Roseman.
South Milwaukee	6,092	Fred W. Hein.
Sparta	3,973	Frank C. Bray.
Stanley	2,675	W. I. White.
Stevens Point	8,962	H. C. Snyder.
Stoughton	4,761	C. J. Anderson.
Sturgeon Bay	4,262	R. Soukup.
Superior	40,384	J. G. Moore.
Tomah	3,419	F. M. Bray.
Tomahawk	2,907	Harmon F. Schell.
Two Rivers	4,850	Wm. T. Darling.
Washburn	3,830	C. E. Hulten.
Watertown	8,829	Thomas J. Berto.
Waukesha	8,740	J. R. Williams.
Waupaca	2,789	F. G. Schneller.
Waupun	3,362	Larue F. Smith.
Wausau	16,560	Silas B. Tobey.
Wauwatosa	3,346	Philip A. Kolb.
West Allis	6,645	T. J. Jones.
Whitewater	3,224	C. W. Rittenburg.
WYOMING.		
Casper	2,639	George Wilder.
Cheyenne	11,320	Ira B. Fee.
Evanston	2,583	C. C. Voeller.
Laramie	8,237	C. E. Eddleblutte.
Rawlins	4,256	C. L. Martin.
Rock Springs	5,778	O. F. Munson.
Sheridan	8,408	J. J. Early.

XIV.—ASSISTANT AND DISTRICT SUPERINTENDENTS OF SCHOOLS IN CITIES OF OVER 25,000 POPULATION.

[Assistant superintendents, unless otherwise specified.]

City.	Assistant superintendents and name or number of the district or division over which they have charge.
Birmingham, Ala	C. B. Glenn
Mobile, Ala	C. F. Vigor.
Berkeley, Cal	M. C. James.
Los Angeles, Cal	J. B. Monlux, deputy.
	M. C. Bettinger.
	Susan M. Dorsey.
Oakland, Cal	L. B. Avery.
	E. Morris Cox.
Sacramento, Cal	Mrs. M. R. O'Neil.
San Francisco, Cal	R. H. Webster.
	Wm. B. Howard.
	Archibald J. Cloud.
	Wm. H. De Bell.
	Mary Magner.
San Jose, Cal	Anne Darling.
Denver, Colo	Wm. H. Smiley.
Bridgeport, Conn	E. F. Cortright.
New Britain, Conn	Ella A. Fallon.
New Haven, Conn	J. C. Knowlton.
	C. C. Russell.
	J. C. McCarthy.
Wilmington, Del	Bessie Devine.
Washington, D. C	Stephen E. Kramer.
	R. C. Bruce.
Atlanta, Ga	Chas. S. Culver.
Augusta, Ga	T. H. Garrett.
Savannah, Ga	F. H. Ferguson.
Bloomington, Ill	Mary A. Kromer.

XIV.—ASSISTANT AND DISTRICT SUPERINTENDENTS OF SCHOOLS IN CITIES OF OVER 25,000 POPULATION—Continued.

[Assistant superintendents, unless otherwise specified.]

City.	Assistant superintendents, and name or number of the district or division over which they have charge.
Chicago, Ill	Samuel B. Allison.
	Ernest E. Cole.
	William M. Roberts.
	District superintendents:
	Ella C. Sullivan, District No. 1.
	Rufus M. Hitch, District No. 2.
	Charles D. Lowry, District No. 3.
	Elizabeth W. Murphy, District No. 4.
	Henry G. Clark, District No. 5.
	John H. Stube, District No. 6.
	Frederick M. Sisson, District No. 7.
	Minnie R. Cowen, District No. 8.
	——— District No. 9.
	Martha V. Bishop, District No. 10.
Decatur, Ill	Katherine Hamilton.
Elgin, Ill	Jennie E. Tarewell.
Evanston, Ill.:	
District No. 75	Frances C. Robertson.
District No. 76	B. H. Corzine.
Joliet, Ill	J. F. Skeel.
Evansville, Ind	Bell Caffee.
Indianapolis, Ind	A. S. Hurrell.
	Laura Frazee.
Terre Haute, Ind	J. M. Tilley.
Davenport, Iowa	Abigail O. Sheriff.
Des Moines, Iowa	J. W. Studebaker.
Sioux City, Iowa	R. L. Hamilton.
Louisville, Ky	District superintendents:
	Ida Rudolph.
	Miss M. Semonin.
	Marian Curry.
	C. E. Ansley.
	B. W. Hartley.
New Orleans, La	Nicholas Bauer.
	Paul B. Habans.
Shreveport, La	A. J. Caldwell.
Portland, Me	Helen M. Robinson, deputy.
Baltimore, Md	Charles A. A. J. Miller.
	Robert W. Elliott.
	Rowland Watts.
	Andrew J. Pietsch.
	Joseph C. Hands.
	John A. Korff.
Boston, Mass	Mary C. Mellyn.
	J. E. Burke.
	A. L. Rafter.
	F. W. Ballou.
Cambridge, Mass	C. M. Herlihy.
Everett, Mass	Abbie A. Smith.
Fall River, Mass	Mary A. Mugan.
Holyoke, Mass	Jennie F. Scolley.
Lawrence, Mass	Leila M. Lamprey.
Lynn, Mass	Wilmer Kinnan.
New Bedford, Mass	Josephine Stuart.
Newton, Mass	Mabel C. Bragg.
Springfield, Mass	Bertha McConkey.
Worcester, Mass	John F. Gannon.
	Alice Louise Harris.
	Walter S. Young.
Battle Creek, Mich	Dessalee R. Dudley
Detroit, Mich	Frank Cody.
	O. G. Frederick.
	Chas. L. Spain.
Grand Rapids, Mich	Mrs. T. Townsend.
Jackson, Mich	G. L. McCulloch.
Minneapolis, Minn	W. F. Webster.
	Elizabeth Hall.
	Flora E. Pope.
St. Paul, Minn	H. A. Eustace.
	L. L. Everly.
	Jennie R. Faddis.
	Katherine Hamilton.
Kansas City, Mo	J. H. Markley.
St. Joseph, Mo	Chas. F. Alt.
St. Louis, Mo	C. G. Rathmann.
	W. J. S. Bryan.
	Geo. Platt Knox.
	Henry J. Gerling.
Butte, Mont	Elga Shearer.
Omaha, Nebr	Belle M. Ryan.
Hoboken, N. J	J. F. Brandt.
Jersey City, N. J	E. A. Murphy.
Newark, N. J	J. Wilmer Kennedy.
	E. K. Sexton.
	C. I. Shirley.
Passaic, N. J	Abbie L. Day.
West Hoboken, N. J.	Elliott J. Tomlinson.
Mount Vernon, N. Y.	Ida E. Roger.
New Rochelle, N. Y.	Mary R. Chamberlin.
New York, N. Y	Associate superintendents:
	Andrew W. Edson.
	William McAndrew.
	Clarence E. Meleney.
	Edward B. Shallow.
	Gustave Straubenmuller.
	John L. Tildsley.
	Wm. J. O'Shea.
Rochester, N. Y	Alfred P. Fletcher.
	Thos. P. O'Hern.
Yonkers, N. Y	L. F. Hodge.
	Bertha Smith.
Charlotte, N. C	Alexander Graham.
Cincinnati, Ohio	E. D. Roberts.
	Anna E. Logan.
Cleveland, Ohio	R. S. Jones.[1]
	A. C. Eldridge.
	F. E. Clerk.
	Catherine T. Bryce.
	E. A. Peterson.
	A. W. Castle.
Columbus, Ohio	C. H. Fullerton.
Toledo, Ohio	H. S. Hutchins.
Portland, Oreg	E. H. Whitney.
	Charles A. Rice.
Easton, Pa	A. J. La Barre.
Johnstown, Pa	Arthur F. Payne.[2]
Philadelphia, Pa	Associate superintendents:
	George Wheeler.
	Oliver P. Cornman.
	Albert H. Raub.
	Louis Nusbaum.
	Theo. L. MacDowell.
	District superintendents:
	Charles A. Coulomb, District No. 1.
	John Christopher, District No. 2.
	William W. Brown, District No. 3.
	John L. Shroy, District No. 4.
	M. C. Cooper, District No. 5.
	Charles H. Brelsford, District No. 6.
	Armand J. Gerson, District No. 7.
	H. White, District No. 8.
	S. L. Chew, District No. 9.

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[1] Deputy superintendent.

[2] Associate superintendent.

XIV.—Assistant and District Superintendents of Schools in Cities of Over 25,000 Population—Continued.

[Assistant superintendents, unless otherwise specified.]

City.	Assistant superintendents, and name or number of the district or division over which they have charge.
Pittsburgh, Pa.	Associate superintendents: R. M. Sherrard, East End District. S. S. Baker, South Side District. C. H. Garwood, North Side District.
Reading, Pa.	Amanda E. Stout. D. E. Crosley.
Shenandoah, Pa.	Katherine McHale.
Providence, R. I.	Wm. H. Eddy. Clara M. Polk. Ella L. Sweeney.
El Paso, Tex.	R. R. Jones.
Fort Worth, Tex.	E. E. Edwards.
Salt Lake City, Utah	G. H. Child.
Lynchburg, Va.	Lucy L. Davis.
Richmond, Va.	A. H. Hill. J. H. Binford.
Seattle, Wash.	Frank E. Willard. T. R. Cole. Almina George.
Tacoma, Wash.	W. Q. Osburn.
Madison, Wis.	Mary A. O'Keefe.
Milwaukee, Wis.	A. E. Kagel. Frank Kroening. Leo Stern.
Sheboygan, Wis.	Addie Libert.
Superior, Wis.	Enid Dolan.

XV.—Business Managers in Cities of Over 25,000 Population.

City.	Business manager.
Mobile, Ala.	Richard Hines, jr.[1]
Little Rock, Ark.	D. R. Fones.
Los Angeles, Cal.	W. E. Record.
Oakland, Cal.	D. W. Pratt.
Pasadena, Cal.	N. G. Felker.
San Diego, Cal.	S. W. Belding.[1]
Colorado Springs, Colo.	T. J. Fox.[1]
Denver, Colo.	Harry V. Kepner.
Bridgeport, Conn.	John B. Wynkoop.
New Haven, Conn.	George T. Hewlett.
Wilmington, Del.	Harry J. Guthrie.[1]
Atlanta, Ga.	L. M. Landrum.
Bloomington, Ill.	Horatio G. Bent.
Chicago, Ill.	Percy B. Coffin.
Decatur, Ill.	Arthur Kinkade.
Evanston (district No. 75), Ill.	Frances C. Robertson.[1]
Peoria, Ill.	M. X. Chuse.
Quincy, Ill.	C. L. Sears.
Evansville, Ind.	Arthur L. Fisher.
Indianapolis, Ind.	George C. Hitt.
South Bend, Ind.	E. I. Kizer.
Terre Haute, Ind.	J. G. Cullings.
Cedar Rapids, Iowa.	J. A. Motejl.[1]
Clinton, Iowa.	A. H. Paddock.
Davenport, Iowa.	J. D. McCollister.
Des Moines, Iowa.	A. L. Clinite.
Dubuque, Iowa.	Leo Palen.
Waterloo (West), Iowa.	J. E. Dempster.
Kansas City, Kans.	E. L. Dennis.
Topeka, Kans.	M. C. Holman.
Wichita, Kans.	J. L. Leland.
Covington, Ky.	W. A. Shore.
Lexington, Ky.	J. O. H. Simrall.
Louisville, Ky.	J. Earl Henry.
Newport, Ky.	Emil Gerhardt.
Shreveport, La.	C. E. Byrd.
Baltimore, Md.	John H. Roche.
Boston, Mass.	William T. Keough.
Cambridge, Mass.	C. J. Church.
Fall River, Mass.	Alfred R. Langlais.
Fitchburg, Mass.	N. C. Upham.
Lowell, Mass.	Henry L. Williams.
Lynn, Mass.	John C. S. Andrew.[1]
Newton, Mass.	Celia M. Chase.[1]
Salem, Mass.	W. W. Andrew.[1]
Springfield, Mass.	Fred L. Ward.
Worcester, Mass.	Joseph Beals.
Battle Creek, Mich.	James Chisholm.[3]
Bay City, Mich.	Frank F. Price.
Calumet, Mich.	Joseph Roberts.
Detroit, Mich.	Charles A. Gadd.
Flint, Mich.	H. L. Hills.
Grand Rapids, Mich	H. N. Morrill.
Jackson, Mich.	J. F. Forward.
Kalamazoo, Mich.	H. W. Anderson.
Lansing, Mich.	Sylva H. Hunter.
Saginaw, Mich.:	
East Side	Wm. C. Klumpp.
West Side	Chas. A. Khuen.
Minneapolis, Minn.	Geo. F. Womrath.
St. Paul, Minn.	Albert Wunderlick.[3]
Kansas City, Mo.	J. B. Jackson.[1]
St. Joseph, Mo.	A. L. Loring.
St. Louis, Mo.	E. M. Brown.[4] R. M. Milligan.[5]
Springfield, Mo.	E. J. Hoffman.[1]
Butte, Mont.	J. Emory Rheim.
Lincoln, Nebr.	J. G. Ludlam.[1]
Omaha, Nebr.	W. T. Bourke.[1]
Atlantic City, N. J.	H. H. Young.[1]
Bayonne, N. J.	J. D. Boyd.
Camden, N. J.	J. W. F. Bleakly.[1]
East Orange, N. J.	W. A. Clapp.
Elizabeth, N. J.	Thos. F. Mackessy.
Hoboken, N. J.	R. A. Marnell.
Orange, N. J.	W. G. McCurdy.
Passaic, N. J.	John F. Kelly.
Paterson, N. J.	Jas. F. Dunphey.[1]
Trenton, N. J.	Wm. A. Poland.
Mount Vernon, N. Y.	E. Q. Bienvenu.
Schenectady, N. Y.	Clarence Ogsbury.
Troy, N. Y.:	
Union District	Wm. A. Dunn.
Lansingburgh District.	Geo. H. Bradshaw.
Charlotte, N. C.	D. M. Abernethy.
Wilmington, N. C.	Chas. B. Newcomb.
Canton, Ohio.	P. H. Weber.
Cincinnati, Ohio.	Chas. W. Handman.
Cleveland, Ohio.	Frank G. Hogen.
Columbus, Ohio.	Edw. B. MacFadden.
Dayton, Ohio.	C. J. Schmidt.
Lorain, Ohio.	E. Bruell.

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[1] Secretary.
[2] Purchasing agent.
[3] Commissioner of education.
[4] Supply commissioner.
[5] Commissioner of school buildings.

Business Managers in Cities of Over 25,000 Population—Continued.

ty.	Business manager.	City.	Business manager.
ld. Ohio...	W. H. Thomas.	Chattanooga, Tenn.	H. D. Huffaker.[3]
hio.......	Edwin M. Gee.	Memphis, Tenn....	G. W. Garner.
wn, Ohio.	S. R. Creps.	Nashville, Tenn....	H. S. Van Doren.
, Okla.	Fred V. Maddin.	Dallas, Tex.........	I. G. Etheridge.
a, Okla...	H. M. Fairey.	El Paso, Tex.......	C. M. Clark.
Oreg......	R. H. Thomas.	Galveston, Tex.....	Edwin Bruce.
Pa.........	C. M. Peifer.	Houston, Tex......	W. Peine.
a..........	Raymond E. Peifer.	San Antonio, Tex..	Paul H. Scholz.
....	R. S. Scobell.	Waco, Tex..........	E. H. Vaden.
g. Pa......	D. D. Hammelbaugh.	Ogden, Utah........	Bessie McCready.
Pa.........	D. T. Evans.[1]	Salt Lake City, Utah.	L. P. Judd.
n, Pa......	Chas. H. Meyer.	Richmond, Va......	C. P. Walford.
rt, Pa.....	W. T. Norton.	Seattle, Wash......	Wylie Hemphill.
le, Pa.....	Hugh M. Marquis.	Tacoma, Wash.....	Alfred Lister.
hia, Pa...	William Dick.	Huntington, W. Va	W. H. Lyons.
h, Pa......	Geo. W. Gerwig.[1]	Wheeling, W. Va..	Frank Stanton.[1]
Pa.........	Robt. E. Richardson.	Milwaukee, Wis....	Frank M. Harbach.
Pa.........	George E. Haak.	Oshkosh, Wis......	Walter Meyer.
....	David N. Crider.[1]	Racine, Wis........	Joseph J. Moritz.
e, R. I...	H. S. Dorchester.[2]	Superior, Wis......	L. A. Nichols.
n, S. C....			

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[1] Secretary. [2] Purchasing agent. [3] Commissioner of education.

CHIEF MEDICAL INSPECTORS OR SCHOOL HEALTH OFFICERS IN CITIES OF OVER 25,000 POPULATION.

ty.	Chief medical inspector or school health officer.	City.	Chief medical inspector or school health officer.
am, Ala..	Dr. J. S. McLester.	Joliet, Ill............	Mary Ellen Kershaw.[2]
la.........	Dr. Toulmin Gaines.	Peoria, Ill...........	Mary R. Youngreen. Dr. F. M. Meisner.
ery, Ala..	Dr. Gibson Reynolds.	Rockford, Ill........	Dr. D. W. Day.
k, Ark...	Dr. Ida J. Brooks.	Springfield, Ill......	Mary J. Heitman.[2] Lena Boswell.[2]
Cal.......	Dr. J. J. Benton.[1] [2]	Evansville, Ind....	Dr. W. R. Cleveland.
les, Cal...	I. R. Bancroft.	Fort Wayne, Ind...	Dr. Chas. R. Dancer.
Cal........	Dr. Margaret Wythe.	Indianapolis, Ind..	Dr. H. G. Morgan.
. Cal.......	Dr. R. C. Olmsted.	South Bend, Ind...	Dr. E. G. Freyermuth.
to, Cal....	Dr. G. C. Simmons.	Terre Haute, Ind..	Dr. L. B. Miller.
, Cal.....		Cedar Rapids, Iowa	Dr. David E. Beardsley
cisco, Cal.	Dr. T. D. Maher.	Clinton, Iowa......	Dr. H. R. Sugg.
Cal........	Dr. N. H. Bullock.	Council Bluffs, Iowa.	Dr V. L. Treynor.
Springs,	Dr. O. R. Gillett.	Davenport, Iowa...	Dr. James Dunn.
olo.:		Des Moines, Iowa..	Dr. Fred Moore.
et No. 1..	Maude Rose.[2]	Dubuque, Iowa....	Maud Reeder.
et No. 20.	Elizabeth Hopkins.[2]	Sioux City, Iowa...	Anna Fobes.
t, Conn..	Dr. Walter H. Brown.	Waterloo, Iowa:	
Conn.....	Dr. F. P. Botsford.	East Side.......	Dr. E. F. Stevenson.
Conn.....	Dr. J. A. Cook.	West Side.......	Dr. Waterbury.
ain, Conn.	Dr. E. J. Dray. Dr. Frank Zwick.	Kansas City, Kans.	Dr. C. W. McLaughlin.
en, Conn.	Dr. F. W. Wright.	Topeka, Kans......	Mrs. Mary Grover.
en (West- district),	Dr. Marsh.	Wichita Kans.....	Genevieve Lill.
Conn.....	Dr. Louis Cassidy.	Covington, Ky.....	Dr. R. J. Ertel.
, Conn....	Dr. I. F. Carroll. Dr. R. G. Phillip.	Lexington, Ky....	Dr. John D. Maguire.
y, Conn..	Dr. C. W. S. Frost.	Louisville, Ky.....	Dr. T. W. Baker.
on, D. C..	Dr. J. A. Murphy.	Newport, Ky.......	Dr. C. E. Wamsley. Dr. Edward North.
lle, Fla...	Dr. Wm. W. MacDonnell.[1]	New Orleans, La...	Dr. Edmund Moss.
la.........	Dr. H. O. Snow.	Shreveport, La.....	Dr. A. P. Crain.
a..........	Dr. J. P. Kennedy.	Baltimore, Md.....	Dr. John D. Blake.
Ga........	Dr. A. A. Davidson.	Boston, Mass.......	Dr. William H. Devine.
a..........	Dr. C. H. Richardson	Brockton, Mass....	A. L. Beals. W. E. Caswell. W. W. Fullerton. G. A. Buckley.
ast side),	Rose Krug.	Brookline, Mass....	Dr. R. W. Hastings.
ton, Ill...	Dr. Godfrey. Dr. Griffin. Dr. Vanderwort.	Cambridge, Mass...	([3]).
ll.........	Dr. J. D. Robertson.	Chelsea, Mass......	Dr. Wm. J. Randall.
Ill........	Pearl Stanton.	Chicopee, Mass....	Dr. Charles O'Brien.
....	Frances Teal.	Everett, Mass......	Dr. W. L. Howe.
, Ill:		Fall River, Mass...	Dr. Samuel B. Morriss.
ct No. 75.	Dr. Mary Brooks Baird.	Fitchburg, Mass....	Dr. Wm. Thompson.
ct No 76.	Dr Mary Mars.	Haverhill, Mass....	Dr. J. J. Fitzgerald.
		Holyoke, Mass.....	Dr. Harold E. Miner.

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health officer. [2] School nurse. [3] City board of health has charge.

XVI.—CHIEF MEDICAL INSPECTORS OR SCHOOL HEALTH OFFICERS IN CITIES OF OVER 25,000 POPULATION—Continued.

City.	Chief medical inspector or school health officer.
Lawrence, Mass	(1).
Lowell, Mass	(2).
Lynn, Mass	Dr. M. R. Donovan.
Malden, Mass	Dr. W. W. Lougee.
New Bedford, Mass.	W. G. Kirschbaum.
Newton, Mass	Dr. Francis G. Curtis.
Pittsfield, Mass	Dr. E. H. Howard.
Quincy, Mass	Dr. Wm. McCausland.
Salem, Mass	Dr. G. E. Tucker.
Somerville, Mass	Dr. C. C. Towle.
Springfield, Mass	Dr. E. H. Guild.
Taunton, Mass	Dr. F. A. Murphy.
Worcester, Mass	Dr. E. H. Trowbridge.
Battle Creek, Mich.	Elizabeth Martin.[3]
Bay City, Mich	Dr. Mary Williams.
Detroit, Mich	Dr. James W. Inches.[4]
Flint, Mich	Dr. W. De Kleine.
Grand Rapids, Mich.	Dr. C. C. Slemons.[4]
Jackson, Mich	Dr. Corwin S. Clarke.
Kalamazoo, Mich	F. Elizabeth Barrett.
Lansing, Mich	Ina M. Taylor.[3]
Saginaw, Mich.:	
East Side	Dr. Edith Hunsberger.
West Side	Dr. J. H. Powers.
Duluth, Minn	Dr. C. H. Schroeder.
Minneapolis, Minn.	
St. Paul, Minn	Dr. E. A. Meyerding.
Kansas City, Mo	Dr. E. H. Bullock.
St. Joseph, Mo	Dr. H. De Lamater.
St. Louis, Mo	Dr. James Stewart.
Springfield, Mo	Dora Stacy.[5]
Butte, Mont	Catherine Combs.[3] Margaret Ryan.[3]
Lincoln, Nebr	Dr. Katherine H. K. Wolfe.
Omaha, Nebr	Dr. E. T. Manning.
Manchester, N. H	Dr. F. P. Scribner.
Nashua, N. H	Dr. Mary A. Sweeney.
Atlantic City, N. J.	Dr. H. T. Harvey.
Bayonne, N. J	Dr. Frederick Gray.
Camden, N. J	Dr. Henry H. Davis.
East Orange, N. J	Dr. W. L. Harrington. Dr. Emma O. Gantz.
Elizabeth, N. J	Dr. Jacob Reiner.
Hoboken, N. J	Dr. Joseph F. Londrigan.
Jersey City, N. J	Dr. H. H. Brinkerhoff.
Newark, N. J	Dr. Geo. J. Holmes.
Orange, N. J	Dr. Ella A. Coughlan.
Paterson, N. J	Dr. Walter L. Dunning.
Perth Amboy, N. J.	Dr. Wm. H. McCormick.
Trenton, N. J	(2)
West Hoboken, N. J	Dr. Wm. A. Draesel.
Albany, N. Y	Dr. Clinton P. McCord.
Amsterdam, N. Y	Dr. Julius Schiller.
Auburn, N. Y	Dr. L. Belle Richens.
Binghamton, N. Y.	Dr. Edith M. Walker.
Buffalo, N. Y	Dr. Francis E. Fronczak.
Elmira, N. Y	Dr. John A. Bennett. Dr. H. W. Fudge.
Jamestown, N. Y	Dr. F. C. Purcell. Dr. Wm. M. Sill.
Kingston, N. Y	Dr. Henry Van Hoevenberg.
Mount Vernon, N. Y	Dr. F. A. M. Bryant.
Newburgh, N. Y	Dr. Emanuel L. Falk.
New Rochelle, N. Y.	Dr. Carol T. Stevens.
New York, N. Y	(1)
Niagara Falls, N. Y	Dr. Walter A. Scott.
Poughkeepsie, N. Y	Dr. C. A. Crispell.
Rochester, N. Y	Dr. George Goler.
Schenectady, N. Y.	Dr. John E. Burke.
Syracuse, N. Y	Dr. Joseph C. Palmer.
Troy, N. Y.:	
Lansingburgh District.	Dr. Charles B. Sprague.
Union District.	Dr. M. D. Dickinson.
Utica, N. Y	Dr. J. W. Fleming.
Watertown, N. Y	Dr. A. H. Allen.
Yonkers, N. Y	Dr. Philip S. McCormick.
Charlotte, N. C	Dr. C. C. Hudson.
Wilmington, N. C	Dr. C. E. Low.
Akron, Ohio	Dr. T. C. Nisbett.
Canton, Ohio	Dr. I. B. Smock.
Cincinnati, Ohio	Dr. Wm. H. Peters.
Cleveland, Ohio	Dr. E. A. Peterson.
Columbus, Ohio	Dr. C. P. Linhart.
Dayton, Ohio	Dr. Louis F. Bucher.
Hamilton, Ohio	Dr. A. L. Smedley.
Lorain, Ohio	Dr. C. R. Meek.
Newark, Ohio	Dr. W. H. Knauss.
Springfield, Ohio	Dr. E. B. Starr.
Toledo, Ohio	Dr. Ralph Stewart.
Youngstown, Ohio.	Dr. H. E. Welch.
Zanesville, Ohio	Dr. G. W. McCormick.
Muskogee, Okla	Dr. Emma S. Keith.
Oklahoma, Okla	Dr. H. H. Cloudman.
Portland, Oreg	(1)
Allentown, Pa	Dr. Thomas Weaber.
Altoona, Pa	Dr. L. E. McKee. Dr. Sarah M. Davies.
Easton, Pa	Mary Poore.
Erie, Pa	Dr. H. R. Steadman.
Harrisburg, Pa	Dr. Chas. S. Rebuck.
Johnstown, Pa	Dr. J. W. Bancroft.
Lancaster, Pa	Dr. W. D. Blankenship. Dr. C. H. Witmer.
McKeesport, Pa	Dr. R. L. Steele.
New Castle, Pa	Dr. V. C. Wagner.
Norristown, Pa	Dr. A. R. Garner. Dr. A. H. Read. Dr. W. R. Roberts.
Philadelphia, Pa	Dr. Bernard Kohn.
Pittsburgh, Pa	Dr. Harry B. Burns.[5]
Reading, Pa	Dr. Hiester Bucher.
Scranton, Pa	Dr. W. E. Keller.
Shenandoah, Pa	Dr. J. S. Monahan.
Wilkes-Barre, Pa	Dr. Chas. B. Lewis.
Williamsport, Pa	Dr. F. W. Kunkle.
Newport, R. I	(1)
Pawtucket, R. I	Dr. Charles H. French.
Providence, R. I	Dr. C. S. Chapin.
Warwick, R. I	Dr. C. J. Astle.
Woonsocket, R. I	Dr. W. F. Barry.
Columbia, S. C	Dr. Edythe Welbourne.
Chattanooga, Tenn.	Dr. E. B. Wise.
Nashville, Tenn	Dr. E. L. Roberts.
Austin, Tex	Mrs. N. B. Scott.[3]
El Paso, Tex	Dr. Hugh White.
Galveston, Tex	Dr. C. T. Stone.
Houston, Tex	Dr. F. J. Slataper.
Waco, Tex	Dr. J. R. Ferrell.
Ogden, Utah	Mary A. Williams.
Salt Lake City, Utah.	Dr. S. G. Paul
Lynchburg, Va	Dr. Mosby G. Perrow.
Norfolk, Va	Dr. J. L. Stringfellow.
Portsmouth, Va	Dr. E. A. Hatton.
Richmond, Va	Dr. N. T. Ennett.
Roanoke, Va	Dr. W. W. S. Butler.
Seattle, Wash	Dr. Ira C. Brown.
Spokane, Wash	Dr. J. E. Drake.
Tacoma, Wash	Dr. E. A. Layton.
Huntington, W. Va	Dr. E. R. Rader.
Wheeling, W. Va	Dr. C. H. Keesor.
La Crosse, Wis	Dr. J. M. Furstman.
Madison, Wis	Dr. W. W. Stebbins.
Milwaukee, Wis	Dr. G. P. Barth.
Oshkosh, Wis	Dr. A. H. Broche.
Racine, Wis	H. C. Baker.
Superior, Wis	Dr. H. A. Russell.

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[1] City board of health has charge.
[2] Nine school physicians.
[3] School nurse.
[4] City health officer.
[5] City director of hygiene.

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
ALABAMA.				
Athens	Athens Female College	Women.	Benjamin B. Glasgow, D. D.	Jano E. B. Brown, A. M.
Auburn	Alabama Polytechnic Institute.	Coed	Charles C. Thach, LL. D.	Zebulon V. Judd, A. M.
Birmingham	Birmingham-Southern College.	Coed	Cullen C. Daniel, D. D.	W. R. Bourne, A. M.
Do	Howard College	Coed	John C. Dawson, LL. D.	W. E. Bohannon, A. M.
Marion	Judson College	Women.	Paul V. Bomar, D. D.	Paul F. Keeton, A. M.
Montevallo	Alabama Girls Technical Institute.	Women.	Thomas W. Palmer, LL. D.	Mary M. Brooke, A. M.
Montgomery	Woman's College of Alabama.	Women.	Miflin W. Swartz, Ph. D.	Grace Lyman, A. M.
St. Bernard	St. Bernard College	Men	Bernard Menges, O. S. B.	
Spring Hill	Spring Hill College	Men	Edward Cummings, S. J.	
University	University of Alabama	Coed	George H. Denny, LL. D.	James J. Doster, LL. D.
ARIZONA.				
Tucson	University of Arizona	Coed	Rufus B. von Klein Smid, Sc. D.	Herbert H. Foster, Ph. D.
ARKANSAS.				
Arkadelphia	Henderson-Brown College.	Coed	James M. Workman, LL. D.	
Do	Ouachita College	Coed	Charles E. Dicken, D. D.	Mrs. E. M. Blake, A. B.
Batesville	Arkansas College	Coed	Wm. S. Lacy, A. B.	Sidney Pickens, A. B.
Clarksville	Arkansas Cumberland College.	Coed	Hubert S. Lyle, D. D.	
Conway	Central College	Women.	John W. Conger, LL. D.	Doak S. Campbell, A. B.
Do	Hendrix College	Coed	John H. Reynolds, LL.D.	
Fayetteville	University of Arkansas	Coed	John C. Futrall, A. M.	James R. Jewell, Ph. D.
CALIFORNIA.				
Berkeley	University of California	Coed	Benj. Ide Wheeler, LL. D.	Alexis F. Lange, Ph. D.
Claremont	Pomona College	Coed	James A. Blaisdell, D. D.	Edwin C. Norton, Ph. D.
Los Angeles	Occidental College	Coed	Silas Evans, LL. D.	George F. Cook, Ph. D.
Do	University of Southern California.	Coed	George F. Bovard, LL. D.	Thomas B. Stowell, LL. D.
Mills College	Mills College	Women.	Aurelia H. Reinhardt, Ph. D.	Kate Brousseau, Ph. D.
Oakland	St. Mary's College	Men	Brother Gregory	
Pasadena	Throop College of Technology.	Men	James A. B. Scherer, LL. D.	
Redlands	University of Redlands	Coed	Victor L. Duke, A. M.	Herbert E. Wise, A. M.
St. Helena	Pacific Union College	Coed	Charles W. Irwin, A. M.	Wm. G. Wirth, A. B.
San Francisco	St. Ignatius University	Men	Patrick J. Foote, D. D.	James Hayos, S. J.
San Jose	College of the Pacific	Coed	John L. Seaton, Ph. D.	J. William Harris, Ph. D.
Santa Clara	University of Santa Clara	Men	Walter Thornton, S. J.	Cornelius Buckley, S. J.
Stanford University.	Leland Stanford Junior University.	Coed	Ray L. Wilbur, A. M.	Ellwood P. Cubberley, Ph. D.
Whittier	Whittier College	Coed	Harry N. Wright, Ph. D.	Mrs. A. Rosenberger, A. B.
COLORADO.				
Boulder	University of Colorado	Coed	Livingston Farrand, LL. D.	Frank E. Thompson, A. B.
Colorado Springs	Colorado College	Coed	Clyde A. Duniway, LL. D.	J. V. Breitwieser, Ph. D.
Denver	College of the Sacred Heart.	Men	J. J. Brown, S. J.	
Fort Collins	Colorado Agricultural College.	Coed	Chas. A. Lory, LL. D.	
Golden	Colorado School of Mines	Men	Victor C. Alderson, LL. D.	
Greeley	State Teachers College of Colorado.	Coed	John G. Crabbe, LL. D	T. C. McCracken, Ph D.
Montclair	Colorado Woman's College.	Women.	J. W. Bailey, Ph. D.	Jay P. Treat, A. M.
University Park	University of Denver	Coed	Henry A. Buchtel, LL. D., chancellor.	Daniel E. Phillips, Litt. D.

XVII.—Universities and Colleges—Presidents and Heads of Departments of Education—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
CONNECTICUT.				
Hartford	Trinity College	Men	Flavel S. Luther, LL. D.	
Middletown	Wesleyan University	Men	William A. Shanklin, LL. D.	
New Haven	Yale University	Men	Arthur T. Hadley, LL. D.	**Herbert Cameron, Ph. D.**
New London	Connecticut College for Women.	Women.	Benjamin T. Marshall, A. M.	
Storrs	Connecticut Agricultural College.	Coed	Charles L. Beach, B. S.	**Theodore H. Eaton, Ph. D.**
DELAWARE.				
Newark	Delaware College	Coed	Samuel C. Mitchell, Ph. D.	**George S. Counts, Ph. D.**
DISTRICT OF COLUMBIA.				
Washington	American University	Coed	John W. Hamilton, L. H. D., chancellor.	
Do	Catholic University of America.	Men	Thomas J. Shahan, S. T. D., rector.	**Thomas E. Shields, Ph. D.**
Do	Gallaudet College	Coed	Percival Hall, M. A.	
Do	Georgetown University.	Men	John B. Creeden, Ph. D.	
Do	George Washington University.	Coed	Wm. M. Collier, LL. D.	**William C. Ruediger, Ph. D.**
Do	Howard University (colored).	Coed	J. Stanley Durkee, Ph. D.	**Lewis B. Moore, Ph. D.**
Do	St. John's College	Men	Brother Edward	
Do	Trinity College	Women.	Sister Catherine Aloysius, S. N. D.	
Do. (Takoma Park).	Washington Missionary College.	Coed	Benjamin F. Machlan, A. M.	
FLORIDA.				
Deland	John B. Stetson University.	Coed	Lincoln Hulley, LL. D.	**Daniel J. Blocker, D. D.**
Gainesville	University of Florida	Men	Albert A. Murphree, LL. D.	**H. W. Cox, Ph. D.**
Lake City	Columbia College	Coed	Andrew P. Montague, LL. D.	
Sutherland	Southern College	Coed	R. H. Alderman, A. B.	
Tallahassee	Florida State College for Women.	Women.	Edward Conradi, Ph. D.	**Nathaniel M. Salley, A. B.**
Winter Park	Rollins College	Coed	Calvin H. French, LL. D.	
GEORGIA.				
Athens	University of Georgia	Men	David C. Barrow, LL. D., chancellor.	**Thomas J. Woofter, LL. D.**
Atlanta	Atlanta University (colored).	Coed	Edward T. Ware, A. B.	**George A. Towns, A. M.**
Do	Georgia School of Technology.	Men	Kenneth G. Matheson, LL. D.	**Emmett P. Tracy, C. E.**
Do	Morehouse College (colored).	Men	John Hope, A. M.	
Do	Morris Brown University (colored).	Coed	William A. Fountain, D. D.	**E. C. Mitchell, A. B.**
College Park	Cox College	Women.	Wm. S. Cox, B. Arch.	**E. C. James, Litt. D.**
Dahlonega	North Georgia Agricultural College.	Coed	Gustavus R. Glenn, LL. D.	**George W. Camp, A. M.**
Decatur	Agnes Scott College	Women.	Frank H. Gaines, LL. D.	**Sara P. White, Ph. D.**
Demorest	Piedmont College	Coed	Frank E. Jenkins, D. D.	**Carl C. Guise, A. M.**
Forsyth	Bessie Tift College	Women.	Joshua H. Foster, D. D.	
Gainesville	Brenau College	Women.	Haywood J. Pearce, Ph. D.	**T. J. Simmons, LL. D.**
Lagrange	Lagrange Female College.	Women.	Daisey Davies	
Do	Southern Female College.	Women.	M. W. Hatton, A. M.	**Roberta Black, A. M.**
Macon	Mercer University	Men	Rufus W. Weaver, D. D.	**Peyton Jacob, A. M.**
Do	Wesleyan Female College.	Women.	C. R. Jenkins, D. D.	**Lois Rogers, A. M.**

VII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
EORGIA—con.				
glethorpe University.	Oglethorpe University	Men	Thornwell Jacobs, LL. D.	
xford	Emory University	Men	James E. Dickey, D.D.	
ome	Shorter College	Women.	A. W. Van Hoose	
uth Atlanta	Clark University (colored).	Coed	Harry A. King, D. D.	Isaac H. Miller, A. B.
HAWAII.				
onolulu	College of Hawaii	Coed	Arthur L. Dean, Ph.D.	
IDAHO.				
aldwell	College of Idaho	Coed	William J. Boone, D. D.	Payne A. Boulton, A. M.
oscow	University of Idaho	Coed	Ernest H. Lindley, Ph. D.	Philip Soulen, A. M.
ILLINOIS.				
bingdon	Hedding College	Coed	Walter D. Agnew, D.D.	A. J. Bissinger, A. M.
urora	Aurora College	Coed	Orrin R. Jenks, A. B.	
loomington	Illinois Wesleyan University.	Coed	Theodore Kemp, LL. D.	John W. Henninger, B. S.
ourbonnais	St. Viator College	Men	J. F. Ryan, C. S. V.	
arthage	Carthage College	Coed	Harvey D. Hoover, Ph. D.	Letta Simmons, A. B.
hicago	Armour Institute of Technology.	Men	Frank W. Gunsaulus, LL. D.	
Do	De Paul University	Coed	F. X. McCabe, LL. D.	
Do	Lewis Institute	Coed	George N. Carman, A. M., director.	
Do	Loyola University	Men	John B. Furay, S. J.	
Do	University of Chicago	Coed	Harry Pratt Judson, LL. D.	Charles H. Judd, LL. D.
ecatur	James Millikin University.	Coed	A. R. Taylor, LL. D.	L. B. Henderson, A. M.
ureka	Eureka College	Coed	H. O. Pritchard, LL. D.	Silas Jones, A. M.
vanston	Northwestern University.	Coed		Elmer E. Jones, Ph. D.
wing	Ewing College	Coed	H. M. Tipsword, Ph.D.	
alesburg	Knox College	Coed	James L. McConaughy, Ph. D.	Wm. A. Raub, Ph. D.
Do	Lombard College	Coed	Joseph M. Tilden, LL. D.	Luther J. Pollard, A. M.
reenville	Greenville College	Coed	Eldon Grant Burritt, A. M.	
cksonville	Illinois College	Coed	Charles H. Rammelkamp, Ph. D.	J. P. McCoy, A. M.
Do	Illinois Woman's College.	Women.	Joseph R. Harker, Ph. D.	Jeanette Benson, A. B.
ake Forest	Lake Forest College	Coed	Henry W. Wright, Ph. D.	
ebanon	McKendree College	Coed	E. P. Baker, A. M. acting.	W. C. Walton, Ph. D.
incoln	Lincoln College	Coed	M. R. Laird, Ph. D.	H. D. Rickert, A. B.
onmouth	Monmouth College	Coed	Thos. H. McMichael, D. D.	Milton M. Maynard, A. B.
aperville	Northwestern College	Coed	Edward E. Rall, Ph.D.	
ockford	Rockford College	Women.	Julia H. Gulliver, LL. D.	Margaret O. Fitzhugh, A. M.
ock Island	Augustana College	Coed	Gustav A. Andreen, D. D.	Axel R. Wallin, Ph. D.
pper Alton	Shurtleff College	Coed	George M. Potter, A.M.	
rbana	University of Illinois	Coed	Edmund J. James, LL. D.	W. W. Charters, Ph. D.
heaton	Wheaton College	Coed	Charles A. Blanchard, D. D.	Wm. F. Rice, A. M.
INDIANA.				
loomington	Indiana University	Coed	William L. Bryan, LL. D.	Henry L. Smith, Ph. D.
awfordsville	Wabash College	Men	Geo. Lewes Mackintosh, LL. D.	George H. Tapy, A. M.
arlham	Earlham College	Coed	David M. Edwards, Ph. D.	Horace F. Martin, A. M.

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
INDIANA—con.				
Franklin	Franklin College	Coed	Charles E. Goodall, LL. D.	John L. Beyl, Ph. D.
Goshen	Goshen College	Coed	George J. Lapp, A. B.	John J. Fisher, A. M.
Greencastle	De Pauw University	Coed	Geo. R. Grose, LL. D.	John A. Clement, Ph. D.
Hanover	Hanover College	Coed	William A. Millis, LL. D.	
Indianapolis	Butler College	Coed	Thomas C. Howe, Ph. D.	Elijah Jordan, Ph. D.
Do	Indiana Central University.	Coed	Irby J. Good, A. M.	H. W. Marshall, A. M.
La Fayette	Purdue University	Coed	Winthrop E. Stone, LL. D.	George L. Roberts, A. M.
Merom	Union Christian College.	Coed	C. B. Hershey, D. D.	
Notre Dame	St. Mary's College and Academy.	Women.	Mother M. Pauline	
Do	University of Notre Dame.	Men	John Cavanaugh, D. D.	
Oakland City	Oakland City College	Coed	Wm. P. Dearing	
Terre Haute	Rose Polytechnic Institute.	Men	Carl L. Mees, Ph. D.	
Upland	Taylor University	Coed	Monroe Vayhinger, D. D.	I. B. Peavy, M. Pd.
Valparaiso	Valparaiso University	Coed	Oliver P. Kinsey, A. M.	George W. Neet, Ped. D.
Vincennes	Vincennes University	Coed	William Halnon, A. M.	Sara J. Morrissey, A. M.
IOWA.				
Ames	Iowa State College of Agriculture and Mechanic Arts.	Coed	Raymond A. Pearson, LL. D.	Guy M. Wilson, A. M.
Cedar Falls	Iowa State Teachers College.	Coed	Homer H. Seerley, LL. D.	G. W. Walters, M. S., acting.
Cedar Rapids	Coe College	Coed	John A. Marquis, LL. D.	Alexander C. Robbie, A. M.
Clinton	Wartburg College	Men	John Fritschel, A. M.	
Davenport	St. Ambrose College	Men	Wm. L. Hannon, A. M.	
Decorah	Luther College	Men	Christian K. Preus, A. B.	Oscar A. Tingelstad, A. M.
Des Moines	Des Moines College	Coed	John A. Earl, D. D.	J. P. Stephenson, Ph. D.
Do	Drake University	Coed	A. Holmes	Wm. F. Varr, A. M.
Dubuque	Dubuque College	Men	John C. Stuart, S. T. L.	J. B. Herbers, A. M.
Dubuque	Dubuque College and Seminary.	Coed	C. M. Steffens, D. D.	
Fairfield	Parsons College	Coed	R. A. Montgomery, LL. D.	John E. Winter, A. M.
Fayette	Upper Iowa University	Coed	Chauncey P. Colegrove, Sc. D.	Wm. C. Mongold, A. M.
Grinnell	Grinnell College	Coed	John H. T. Main, LL. D.	L. D. Hartson, Ph. D.
Hopkinton	Lenox College	Coed		Ely V. Laughlin, A. B.
Indianola	Simpson College	Coed	James W. Campbell, Ph. D.	R. A. Cummins, Ph. D
Iowa City	State University of Iowa	Coed	Walter A. Jessup, Ph. D.	Wm. F. Russell, Ph.
Iowa Falls	Ellsworth College	Coed	Ido F. Meyer, A. M.	Harold C. Bingh A. M.
Mount Pleasant	Iowa Wesleyan College	Coed	Edwin A. Schell, D. D.	Elmer E. Lymer, A.
Mount Vernon	Cornell College	Coed	Charles W. Flint, LL. D.	John E. Stout, Ph. D.
Oskaloosa	Penn College	Coed	Henry E. McGrew, D. D.	Ella H. Stokes, Ph. D.
Pella	Central University of Iowa.	Coed	Milton J. Hoffman, A. M.	Frank M. Phillips, A. M.
Sioux City	Morningside College	Coed	Alfred E. Craig, D. D.	E. A. Brown, A. M.
Storm Lake	Buena Vista College	Coed	Stanton Olinger, Ph. D.	Mrs. F. W. Harrison, A. M.
Tabor	Tabor College	Coed	Nelson Wehrhan, D. D.	C. W. Shroeder, A. M.
University Park	Central Holiness University.	Coed	J. L. Brasher, D. D.	Roy O. Brown, A. M.
KANSAS.				
Atchison	Midland College	Coed	Rufus B. Peery, Ph. D.	Fred S. Sorrenson, A. M.
Do	St. Benedict's College	Men	Innocent Wolf, D. D.	

XLIV.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
KANSAS—contd.				
Baldwin City....	Baker University........	Coed....	Samuel A. Lough, Ph. D.	Lillian Scott, A. M.
Emporia..........	College of Emporia......	Coed....	Frederick W. Lewis, D. D.	Conrad Vandervelde, A. M.
Highland.........	Highland College........	Coed....	W. Gilbert James, Ph D.	
Kansas City......	Kansas City University.	Coed....	J. H. Lucas, LL. D., chancellor.	Wm. S. Reese, D. D.
Lawrence.........	University of Kansas....	Coed....	Frank Strong, LL. D..	F. J. Kelley, Ph. D.
Lindsborg........	Bethany College.........	Coed....	Ernst F. Pihlblad, D. D.	Anna A. Carlson.
McPherson.......	McPherson College......	Coed....	Daniel W. Kurtz, D. D.	Ammon Swope, A. M.
Manhattan.......	Kansas State Agricultural College.	Coed....	Wm. M. Jardine, LL. D.	Edwin L. Holton, A. B.
Ottawa...........	Ottawa University......	Coed....	Silas E. Price, D. D...	Forrest A. Kingsbury, A. M.
St. Marys........	St. Marys College.......	Men.....	Wm. J. Wallace, A. M.	
Salina............	Kansas Wesleyan University.	Coed....	....	Albert H. King, M. Ped.
Sterling..........	Cooper College..........	Coed....	Ross T. Campbell, D. D.	Althea E. Montgomery, A. M.
Topeka...........	Washburn College.......	Coed....	Parley P. Womer, Sc. D.	E. Leigh Mudge, Ph. D.
Wichita..........	Fairmount College......	Coed....	Walter H. Rollins, D. D.	W. G. Binnewies, A. M.
Do...........	Friends University......	Coed....	W. O. Mendenhall, Ph. D.	H. C. Fellows, Ph. D.
Winfield.........	Southwestern College....	Coed....	Frank E. Mossman, D. D.	O. B. Baldwin, A. M.
KENTUCKY.				
Berea............	Berea College............	Coed....	Wm. G. Frost, D. D..	Cloyd N. McAllister, Ph. D.
Bowling Green...	Ogden College...........	Men.....	Wm. M. Pearce, A. B.	
Danville.........	Central University of Kentucky.	Men.....	Wm. A. Ganfield, D. D.	Henry Meier, Ph. D.
Georgetown......	Georgetown College.....	Coed....	Maldon B. Adams, D. D.	A. L. Rhoton, A. M.
Hopkinsville.....	Bethel Female College..	Women.	Clara B. Thompson, A. B.	
Lexington........	University of Kentucky.	Coed....	Frank L. McVey, LL. D.	J. T. C. Noe, A. M.
Do...........	Transylvania College....	Coed....	Richard H. Crossfield, LL. D.	Wm. C. Bower, A. M.
Louisville........	University of Louisville.	Coed....	John Patterson, LL. D., dean.	
Russellville......	Bethel College...........	Men.....	Robert H. Tandy, D. D.	
St. Mary.........	St. Marys College.......	Men.....	Michael Jaglowicz, C. R.	
Winchester.......	Kentucky Wesleyan College	Coed....	J. L. Clark, LL. D....	
LOUISIANA.				
Baton Rouge.....	Louisiana State University and Agricultural and Mechanical College.	Coed	Thomas D. Boyd, LL. D.	Delmar T. Powers, A. M.
Clinton...........	Silliman Collegiate Institute.	Women.	U. B. Currie..........	
Convent..........	Jefferson College.........	Men.....	R. H. Smith, S. M.....	
New Orleans.....	H. Sophie Newcomb Memorial College.	Women.	Brandt V. B. Dixon, LL. D.	John M. Fletcher, Ph. D.
Do...........	Loyola University.......	Men.....	Alphonsus E. Otis, S. J.	Michael J. Walsh, S. J.
Do...........	Tulane University of Louisiana.	Men.....	Albert B. Dinwiddie, LL. D.	
Pineville.........	Louisiana College........	Coed....	C. Cottingham, A. M..	
MAINE.				
Brunswick.......	Bowdoin College.........	Men.....	Kenneth C. M. Sills, LL. D.	
Lewiston.........	Bates College............	Coed....	George C. Chase, LL. D.	Robert A. F. McDonald, Ph. D.

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
MAINE—contd.				
Orono	University of Maine	Coed	Robert J. Aley, LL.D.	**Wm. E. Fuller, A. M., Ph. D.**
Van Buren	Van Buren College (St. Mary's).	Men	C. J. Barth	
Waterville	Colby College	Coed	Arthur J. Roberts, A. M.	
MARYLAND.				
Annapolis	St. John's College	Men	Thomas Fell, LL. D.	
Do	United States Naval Academy.	Men	Capt. Edward W. Eberle superintendent.	
Baltimore	Goucher College	Women	Wm. W. Guth, Ph. D.	**Agnes L. Rogers, Ph. D.**
Do	Johns Hopkins University.	Coed	Frank J. Goodnow, LL. D.	**Edward F. Buchner, Ph. D.**
Do	Morgan College (colored)	Coed	John O. Spencer, Ph. D.	**Wm. Pickens, Litt. D.**
Do	Mount St. Joseph's College.	Men	Brother James, A. B.	
Do	Notre Dame College of Maryland.	Women	Sister Mary Florentine	
Chestertown	Washington College	Coed		
College Park	Maryland State College of Agriculture.	Men	Alfred F. Woods, D. Agr.	**H. F. Cotterman, A. M.**
Ellicott City	Rock Hill College	Men	Brother Pius, A. B.	
Emmitsburg	Mount St. Mary's College.	Men	Bernard J. Bradley, LL. D.	
Frederick	Hood College	Women	Joseph H. Apple, LL. D.	**Benj. W. Daily, A. M.**
Lutherville	Maryland College for Women.	Women	Beekman O. Rouse, A. B.	
New Windsor	Blue Ridge College	Coed	F. F. Holsopple, L. H. D.	
Westminister	Western Maryland College.	Coed	Thomas H. Lewis, LL. D.	**Walter F. Clayton, Ph. D.**
MASSACHUSETTS.				
Amherst	Amherst College	Men	Alexander Meiklejohn, Ph. D.	
Do	Massachusetts Agricultural College.	Coed	Kenyon L. Butterfield, LL. D.	**Wm. R. Hart, A. M.**
Boston	Boston University	Coed	Lemuel H. Murlin, D. D.	**Arthur H. Wilde, Ph. D.**
Do	Simmons College	Women	Henry Lefavour, LL. D.	**Sarah L. Arnold, A. M.**
Cambridge	Harvard University	Men	Abbott Lawrence Lowell, LL. D.	**Henry W. Holmes, A. M.**
Do	Massachusetts Institute of Technology.	Coed	Richard C. Maclaurin, LL. D.	
Do	Radcliffe College	Women	Le Baron R. Briggs, LL. D.	**Henry W. Holmes, A. M.**
Chestnut Hill	Boston College	Men	Charles W. Lyons, S. J.	
Lowell	Lowell Textile School		Chas. H. Eames, B. S.	
Northampton	Smith College	Women	William A. Neilson, LL. D.	**Harvey G. Townsend, Ph. D.**
Norton	Wheaton College	Women	Samuel V. Cole, LL.D.	**Walter O. McIntire, Ph. D.**
South Hadley	Mount Holyoke College	Women	Mary E. Woolley, LL. D.	**Colin A. Scott, Ph. D.**
Springfield	International Young Men's Christian Association College.	Men	Lawrence L. Doggett, D. D.	
Tufts College	Tufts College	Coed	Hermon C. Bumpus, LL. D.	**Karl Schmidt, Ph. D.**
Wellesley	Wellesley College	Women	Ellen F. Pendleton, LL. D.	**Arthur O. Norton, A. M.**
Williamstown	Williams College	Men	Harry A. Garfield, LL. D.	
Worcester	Clark University	Men	G. Stanley Hall, LL. D.	**Wm. H. Burnham, Ph. D.**
Do	Clark College	Men	Edmund Clark Sanford, LL. D.	**Ludwig R. Geissler, Ph. D.**
Do	College of the Holy Cross.	Men	Joseph N. Dinand, S.J.	**James A. Mullen, S. J.**
Do	Worcester Polytechnic Institute.	Men	Ira N. Hollis, Sc. D.	

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
MICHIGAN.				
Adrian	Adrian College	Coed	Harlan L. Feeman, D. D.	O. R. Stilson, A. M.
Albion	Albion College	Coed	Samuel Dickie, LL. D.	Delos Fall, LL. D.
Alma	Alma College	Coed	Harry Means Crooks, A. B.	George B. Randels, Ph. D.
Ann Arbor	University of Michigan	Coed	Harry B. Hutchins, LL. D.	Allen S. Whitney, A. B.
Berrien	Emmanuel Missionary College.	Coed	Frederick Griggs.	
Detroit	University of Detroit	Men	Wm. T. Doran, S. J.	Simon J. Nicolas, S. J.
East Lansing	Michigan Agricultural College.	Coed	Frank S. Kedzie, Sc. D.	Walter H. French, M. S.
Hillsdale	Hillsdale College	Coed	Joseph W. Mauck, LL. D.	W. H. Mack.
Holland	Hope College	Coed	Edward D. Dimnent, A. M.	Carl J. Knock, Ph. D.
Houghton	Michigan College of Mines.	Men	Fred W. McNair, Sc. D.	
Kalamazoo	Kalamazoo College	Coed	Herbert L. Stetson, LL. D.	
Olivet	Olivet College	Coed	Theodore H. Wilson, A. M.	Olga O. Latham, A. M.
MINNESOTA.				
Collegeville	St. John's University	Men	Peter Engle, Ph. D.	Kilian Held, A. M.
Minneapolis:	Augsburg Seminary	Men	George Sverdrup, M. A.	
Do	University of Minnesota.	Coed	Marion Le Roy Burton, LL. D.	Lotus D. Coffman, Ph. D.
Northfield	Carleton College	Coed	Donald J. Cowling, Ph. D.	Leal A. Headley, Ph. D.
Do	St. Olaf College	Coed	L. W. Boe, A. B	Julius Boraas, Ph. D.
St. Paul	College of St. Catherine	Women.	Sister Antonia, A. M.	Sister Ste. Helene, A. M.
Do	College of St. Thomas	Men	Humphrey Moynihan, D. D.	Joseph A. Schabert, A. M.
Do	Hamline University	Coed	Samuel F. Kerfoot, D. D.	George S. Innis, Ph. D.
Do	Macalester College	Coed	Elmer A. Bess, D. D.	Andrew W. Anderson, A. M.
St. Peter	Gustavus Adolphus College.	Coed	Oscar J. Johnson, B. D.	S. L. Reed, Ph. D.
Winona	College of St. Teresa	Women.	Mother M. Leo Tracy	Mary A. Molloy, Ph. D.
MISSISSIPPI.				
Agricultural College.	Mississippi Agricultural and Mechanical College.	Coed	W. H. Smith	James V. Bowen, Ph. B.
Blue Mountain	Blue Mountain College	Women.	W. J. Lowrey, LL. D.	O. G. Davis, B. D.
Brookhaven	Whitworth Female College.	Women.	I. W. Cooper, D. D.	
Clinton	Mississippi College	Men	John W. Provine, LL. D.	Wm. H. Weathersby, A. M.
Columbus	Mississippi Industrial Institute and College.	Women.	Henry L. Whitfield, LL. D.	Anne L. Fant, A. M.
Grenada	Grenada College	Women.	J. R. Countiss, A. B.	
Holly Springs	Rust College (colored)	Coed	George Evans, D. D.	Emma H. Gifford, B. S.
Jackson	Belhaven College	Women.	W. H. Frazer, D. D.	Olive M. Jones, A. B.
Do	Millsaps College	Coed	Alexander F. Watkins, D. D.	Stuart G. Noble, Ph. D.
Meridian	Meridian College	Coed	J. W. Beeson, LL. D.	J. A. Smith, A. M.
University	University of Mississippi.	Coed	Joseph N. Powers, LL. D., chancellor.	R. W. Rogers, A. M.
MISSOURI.				
Cameron	Missouri Wesleyan College.	Coed	Cameron Harmon, D. D.	Emily Dexter, A. M.
Canton	Culver-Stockton College.	Coed	John H. Wood, D. D.	George E. Breece, A. M.
Columbia	University of Missouri	Coed	Albert Ross Hill, LL. D.	Jesse H. Coursault, Ph. D.
Fayette	Central College	Coed	Paul H. Linn, D. D.	Roy C. Holl, A. B.
Fulton	Westminister College	Men	E. E. Reed, D. D.	
Lexington	Central College for Women.	Women.	Z. M. Williams, D. D.	Nelle M. Ward, A. M.
Liberty	William Jewell College	Men	John P. Greene, LL. D.	W. O. Lewis, Ph. D.
Marshall	Missouri Valley College.	Coed	Wm. H. Black, LL. D.	John J. Dynes, A. M.
Parkville	Park College	Coed	Frederick W. Hawley, D. D.	W. A. Cook, A. M.

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
MICHIGAN.				
Adrian	Adrian College	Coed	Harlan L. Feeman, D. D.	O. R. Stilson, A. M.
Albion	Albion College	Coed	Samuel Dickie, LL. D.	Delos Fall, LL. D.
Alma	Alma College	Coed	Harry Means Crooks, A. B.	George B. Randels, Ph. D.
nn Arbor	University of Michigan	Coed	Harry B. Hutchins, LL. D.	Allen S. Whitney, A. B.
errien	Emmanuel Missionary College.	Coed	Frederick Griggs.	
etroit	University of Detroit	Men	Wm. T. Doran, S. J.	Simon J. Nicolas, S. J.
st Lansing	Michigan Agricultural College.	Coed	Frank S. Kedzie, Sc. D.	Walter H. French, M. S.
llsdale	Hillsdale College	Coed	Joseph W. Mauck, LL. D.	W. H. Mack.
lland	Hope College	Coed	Edward D. Dimnent, A. M.	Carl J. Knock, Ph. D.
ighton	Michigan College of Mines.	Men	Fred W. McNair, Sc. D.	
amazoo	Kalamazoo College	Coed	Herbert L. Stetson, LL. D.	
t	Olivet College	Coed	Theodore H. Wilson, A. M.	Olga O. Lat
NESOTA.				

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
MISSOURI—con.				
St. Louis	St. Louis University	Men	Bernard J. Otting, S. J.	
Do	Washington University	Coed	Frederic A. Hall, LL. D., chancellor.	**Edgar J. Swift, Ph. D.**
Springfield	Drury College	Coed	Thomas W. Nadal, Ph. D.	**Joseph T. Williams, Ph. D.**
Tarkio	Tarkio College	Coed	Joseph A. Thompson, D. D.	
Warrenton	Central Wesleyan College.	Coed	Otto E. Kriege, D. D.	**Frank O. Spohrer, B. S.**
MONTANA.[1]				
Bozeman	Montana College of Agriculture and Mechanic Arts.	Coed	J. M. Hamilton, M. S.	**M. J. Abbey, A. B.**
Butte	Montana State School of Mines.	Coed	Charles H. Bowman, M. S.	
Missoula	University of Montana	Coed	Edward O. Sisson, Ph. D.	
NEBRASKA.				
Bellevue	Bellevue College	Coed	David R. Kerr	
Bethany	Cotner University	Coed	Andrew D. Harmon, A. M.	**Mrs. A. O. Thomas.**
College View	Union College	Coed	Harry A. Morrison, A. M.	**M. P. Robinson.**
Crete	Doane College	Coed	Wm. O. Allen, Ph. D.	**A. G. Heyhoe, A. M.**
Grand Island	Grand Island College	Coed	Edward F. Jorden, D. D.	**George Sutherland, D. D.**
Hastings	Hastings College	Coed	R. B. Crone, Ph. B.	**F. E. Weyer, A. M.**
Lincoln	University of Nebraska[2]	Coed	Samuel Avery, LL. D., chancellor.	**Charles Fordyce, Ph. D.**
Omaha	Creighton University	Men	F. X. McMenamy, S. J.	**Robert M. Kelley, S. J.**
Do	University of Omaha	Coed	Daniel E. Jenkins, Ph. D.	**P. R. Stevenson, A. M.**
University Place.	Nebraska Wesleyan University.	Coed	Isaac B. Schreckengast, S. T. B.	**B. E. McProud, A. M.**
York	York College	Coed	M. O. McLaughlin, D. D.	**Guy Buswell, A. M.**
NEVADA.				
Reno	State University of Nevada.	Coed	Walter E. Clark, Ph. D.	**James Reed Young, A. M., acting**
NEW HAMPSHIRE.				
Durham	New Hampshire College of Agriculture and Mechanic Arts.	Coed	Ralph D. Hetzel, LL. B.	**Charles L. Simmers, B. A.**
Hanover	Dartmouth College	Men	Ernest M. Hopkins, LL. D.	
Manchester	St. Anselm's College	Men	Abbot Ernest, O. S. B.	
NEW JERSEY.				
Convent Station	College of St. Elizabeth	Women	Sister Mary Pauline, LL. D.	**Sister Regina Clare, B. S.**
Hoboken	Stevens Institute of Technology.	Men	Alexander C. Humphreys, LL. D.	
Jersey City	St. Peter's College	Men	James F. McDermott, S. J.	
Kenilworth	Upsala College	Coed	Peter Froeberg, B. D.	
New Brunswick	Rutgers College	Men	Wm. H. S. Demarest, LL. D.	**Charles H. Elliott, Ph. D.**
Princeton	Princeton University	Men	John Grier Hibben, LL. D.	
South Orange	Seton Hall College	Men	Jas. F. Mooney, LL. D.	
NEW MEXICO.				
Albuquerque	University of New Mexico.	Coed	David R. Boyd, Ph. D.	**Charles E. Hodgin, B. Pd.**
Socorro	New Mexico School of Mines.	Coed	A. X. Illinski, Met. E.	
State College	New Mexico College of Agriculture and Mechanic Arts.	Coed	Austin D. Crile	**John H. Vaughan, A. M.**

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[1] Chancellor of the University of Montana, Edward C. Elliot, Ph. D.
[2] Graduate School of Education, G. W. A. Luckey, Ph. D.

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
NEW YORK.				
Albany	New York State College for Teachers.	Coed	A. R. Brubacher, Ph. D.	Leonard A. Blue, Ph. D.
Alfred	Alfred University	Coed	Boothe C. Davis, LL. D.	Ford S. Clarke, Ph. B.
Annandale	St. Stephen's College	Men	Wm. C. Rodgers, D. D.	
Aurora	Wells College	Women	Kerr D. Macmillan, S. T. D.	
Brooklyn	Adelphi College	Coed	Frank D. Blodgett, LL. D.	James W. Park, A. M.
Do	College of St. Francis Xavier.	Men	Joseph H. Rockwell, S. J.	
Do	Polytechnic Institute of Brooklyn.	Men	Fred. W. Atkinson, Ph. D.	
Do	St. Francis College	Men	Brother David, O. S. F.	
Do	St. John's College	Men	John W. Moore, LL. D.	
Buffalo	Canisius College	Men	Geo. J. Krim, S. J.	
Do	University of Buffalo	Coed	Chas. P. Norton, chancellor.	Mary H. Lewis.
Canton	St. Lawrence University	Coed	Edwin L. Hulett, A. M., acting.	Charles M. Rebert, A. M.
Clinton	Hamilton College	Men	Frederick C. Ferry, LL. D.	William H. Squires, Ph. D.
Elmira	Elmira College	Women	Frederick Lent, Ph. D.	John R. Tuttle, Ph. D.
Geneva	Hobart College	Coed	Lyman P. Powell, A. B.	
Hamilton	Colgate University	Men	Elmer B. Bryan, LL. D.	Melbourne S. Read, Ph D.
Ithaca	Cornell University	Coed	Jacob G. Schurman, LL. D.	George P. Bristol, A. M.
New Rochelle	College of New Rochelle.	Women	Joseph F. Mooney, D. D.	M. M. Xavier, A. M.
New York	Barnard College	Women	Virginia C. Gildersleeve, Ph. D., dean.	
Do	College of the City of New York.	Men	Sidney E. Mezes, LL. D.	Stephen P. Duggan, Ph. D.
Do	Columbia University	Coed	Nicholas M. Butler, LL. D.	(1)
Do	Fordham University	Men	Jos. A. Mulry, Ph. D.	
Do	Hunter College of the City of New York.	Women	George S. Davis, LL. D.	James M. Kieran, LL. D.
Do	Manhattan	Men	Brother Edward, A. B.	F. J. Plattler, A. M.
Do	New York University	Coed	Elmer Ellsworth Brown, LL. D., chancellor.	Thomas M. Balliet, Ph. D.
Do	Teachers College	Coed	James E. Russell, LL. D., dean.	
Niagara University.	Niagara University	Men	Wm. F. Likly, C. M.	
Potsdam	Clarkson College of Technology.	Men	John P. Brooks, Sc. D., director.	
Poughkeepsie	Vassar College	Women	Henry N. MacCracken, LL. D.	
Rochester	University of Rochester.	Coed	Rush Rhees, LL. D.	George M. Forbes, LL. D.
St. Bonaventure.	St. Bonaventure's College.	Men	Alexander M. Hickey, Ph. D.	
Schenectady	Union University	Men	Charles A. Richmond, LL. D.	
Syracuse	New York State College of Forestry (at Syracuse University).	Men	Hugh P. Baker, M. F., dean.	
Do	Syracuse University	Coed	James R. Day, LL. D., chancellor.	Mark E. Penney, Ph. D.
Troy	Rensselaer Polytechnic Institute.	Men	Palmer C. Ricketts, LL. D.	
Do	Russell Sage College of Practical Arts.	Women	Eliza Kellas, Ph. B.	
West Point	United States Military Academy.	Men	Col. Samuel E Tillman, supt.	
NORTH CAROLINA.				
Asheville	St. Genevieve's College and Academy.	Women	Mother M. L. Lorin	
Belmont	Belmont Abbey College.	Men	Leo Haid, D. D.	
Chapel Hill	University of North Carolina.	Coed		Marcus C. S. Noble, Ph. D.
Charlotte	Biddle University (colored).	Men	H. L. McCrorey, D. D.	
Do	Queens College	Women	Henry C. Evans, D. D	

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[1] See Teachers College.

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
NORTH CAROLINA—con.				
Davidson	Davidson College	Men	Wm. J. Martin, Ph. D.	Archibald Currie, A. M.
Durham	Trinity College	Coed	Wm. P. Few, LL D.	Eugene C. Brooks, Lit. D.
Elon College	Elon College	Coed	Wm. A. Harper, LL. D.	W. C. Wicker, Litt. D.
Greensboro	Greensboro College for Women.	Women	S. B. Turrentine, D. D.	David F. Nicholson, A. M.
Guilford College	Guilford College	Coed	Raymond Binford, Ph. D.	
Hickory	Lenoir College	Coed	R. L. Fritz, D. D	S. P. Schneider, A. M.
Raleigh	Meredith College	Women	Charles E. Brewer, Ph. D.	Mary Shannon Smith, A. M.
Do	Peace Institute	Women	Mary O. Graham	Ada V. Womble.
Do	St. Mary's School	Women	Warren W. Way	
Do	Shaw University (colored).	Coed	Chas. F. Meserve, LL. D.	
Red Springs	Flora Macdonald College	Women	C. G. Vardell, D. D	
Salisbury	Livingstone College (colored).	Coed	D. C. Suggs, Ph. D	W. H. Hannum, A. M.
Wake Forest	Wake Forest College	Men	Wm. L. Poteat, LL. D.	T. E. Cochran, A. M.
West Raleigh	North Carolina State College of Agriculture and Engineering.	Men	W. C. Riddick, LL. D.	Thomas E. Browne, A. B.
Wilson	Atlantic Christian College.	Coed	Raymond A. Smith, A. M.	F. F. Grim, A. M.
Winston-Salem	Salem Academy and College.	Women	Howard E. Rondthaler, D. D.	Edwin J. Heath, B. D.
NORTH DAKOTA.				
Agricultural College.	North Dakota Agricultural College.	Coed	Edwin F. Ladd, LL. D.	Arland D. Weeks, A. M.
Fargo	Fargo College	Coed	E. Lee Howard, D. D.	Anna M. Tibbets, Ph. D.
Jamestown	Jamestown College	Coed	Barend H. Kroeze, D. D.	Francis B. Taylor, Ph. D.
University	University of North Dakota.	Coed	Thomas F. Kane, LL D	Joseph Kennedy, LL. D.
OHIO.				
Ada	Ohio Northern University.	Coed	Albert E. Smith, D. D.	John Davison, D. Ped.
Akron	Municipal University of Akron.	Coed	Parke R. Kolbe, Ph. D.	
Alliance	Mount Union College	Coed	Wm. H. McMaster, D. D.	John B. Bowman, A. M.
Ashland	Ashland College	Coed	Wm. D. Furry, Ph. D.	Edward Byers, A. M.
Athens	Ohio University	Coed	Alston Ellis, LL. D	John J. Richeson, D. Ped.
Berea	Baldwin-Wallace College.	Coed	A. B. Storms	Fletcher D. Ward, M.
Bluffton	Bluffton College	Coed	Samuel K. Mosiman, Ph. D.	Harry G. Good, Ph. D.
Cedarville	Cedarville College	Coed	Wilbert R. McChesney, D D.	Arthur St. C. Sloan, A. B
Cincinnati	St. Xavier College	Men	James McCabe, S. J	
Do	University of Cincinnati.	Coed	Chas. W. Dabney, LL. D	Wm. P. Burris, L. H. D.
Cleveland	Case School of Applied Science.	Men	Charles S. Howe, Ph. D.	
Do	St. Ignatius College	Men	Wm. B. Sommerhouser, S. J.	
Do	Western Reserve University.	Coed	Charles F. Thwing, LL. D.	
Columbus	Capital University	Men	Otto Mees, A. M	
Do	Ohio State University	Coed	Wm. O. Thompson, LL. D.	George W. Knight, Ph. D.
Dayton	St. Mary College	Men	Bernard P. O'Reilly, D. D.	
Defiance	Defiance College	Coed	Albert G. Carls, Litt. D.	E. L. Lawson, A. M.
Delaware	Ohio Wesleyan University.	Coed	John W. Hoffman, LL. D.	Arthur R. Mead, A. M.
Findlay	Findlay College	Coed	Wm. H. Guyer, D. D.	H. S. Brinser, M. Pd.
Gambier	Kenyon College	Men	Wm. F. Peirce, L. H. D.	
Granville	Denison University	Coed	Clark W. Chamberlain, Ph. D.	T. A. Lewis, Ph. D.
Hiram	Hiram College	Coed	Miner Lee Bates, LL. D.	M. R. Gabbert, A. M.

XVII.—Universities and Colleges—Presidents and Heads of Departments of Education—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
OHIO—continued.				
Marietta	Marietta College	Coed	George W. Hinman, Ph. D.	Jesse V. McMillan, A. M.
New Athens	Franklin College	Coed	Will M. Hughes, D. D.	W. R. Cornetet, B. S.
New Concord	Muskingum College	Coed	J. K. Montgomery, D. D.	J. G. Lowery, A. M.
Oberlin	Oberlin College	Coed	Henry C. King, LL. D.	Edward A. Miller, Ph. D.
Oxford	Miami University	Coed	Raymond M. Hughes, M. S.	Harvey C. Minnick, LL. D.
Do	Oxford College for Women.	Women	Eleanor N. Adams, Ph. D.	Marian A. Bills, Ph. D.
Do	Western College for Women.	Women	W. W. Boyd, Ph. D.	Jay G. Hickox, B. S.
Painesville	Lake Erie College	Women	Vivian Blanche Small, LL. D.	Esther Crane, Ph. D.
Rio Grande	Rio Grande College	Coed	Simeon H. Bing, A. M.	W. G. Scarberry, A. B.
Springfield	Wittenberg College	Coed	Charles G. Heckert, D. D.	T. Bruce Birch, Ph. D.
Tiffin	Heidelberg University	Coed	Charles E. Miller, LL. D.	E. I. F. Williams, A. M.
Toledo	St. John's University	Men	Francis X. Buch, A. M.	Francis P. Kemper, A. M.
Do	Toledo University	Coed	A. Monroe Stowe, Ph. D.	A. W. Trettien, Ph. D.
Westerville	Otterbein College	Coed	Walter G. Clippinger, D. D.	Edmund A. Jones, Ph.D.
Wilberforce	Wilberforce University (colored).	Coed	Wm. S. Scarborough, LL. D.	Gilbert Jones, Ph. D.
Wilmington	Wilmington College	Coed	J. Edwin Jay, A. M.	ed C. Waters, A. M.
Wooster	College of Wooster	Coed	J. Campbell White, LL. D.	Martin Remp, A. M.
Yellowsprings	Antioch College	Coed	George D. Black, D. D.	Stephen F. Weston, Ph. D.
OKLAHOMA.				
Chickasha	Oklahoma College for Women.	Women	G. W. Austin, B. S.	I. E. Mott, A. M.
East End	Phillips University	Coed	Isaac N. McCash, LL. D.	Samuel H. Horne, A. M.
Guthrie	Methodist University of Oklahoma.	Coed	Edward Hislop, D. D.	Edwin G. Green, A. B.
Kingfisher	Kingfisher College	Coed	Henry W. Tuttle, D.D.	
Norman	University of Oklahoma.	Coed	Stratton D. Brooks, LL. D.	W. W. Phelan, Ph. D.
Stillwater	Oklahoma Agricultural and Mechanical College.	Coed	James W. Cantwell, A. M.	John H. Bowers, Ph. D.
Tulsa	Henry Kendall College	Coed	Arthur L. Odell, D. D.	
OREGON.				
Albany	Albany College	Coed	Wallace H. Lee, LL. D.	
Corvallis	Oregon Agricultural College.	Coed	William J. Kerr, Sc. D.	Edwin D. Ressler, A. M.
Eugene	University of Oregon	Coed	Prince L. Campbell, LL. D.	Henry D. Sheldon, Ph.D.
Forest Grove	Pacific University	Coed	Robert F. Clark, A. M.	Henry L. Bates, A. M.
McMinnville	McMinnville College	Coed	Leonard W. Riley, D. D.	Curtis P. Coe, A. B.
Newberg	Pacific College	Coed	Levi T. Pennington, A. B.	R. W. Lewis, Ph.B.
Portland	Reed College	Coed	Wm. T. Foster, LL. D.	Hoseph K. Hart, Ph.D.
Salem	Willamette University	Coed	Carl G. Doney, LL. D.	Charles L. Sherman, Ph. D.
PENNSYLVANIA.				
Allentown	Allentown College for Women.	Women	Wm. F. Curtis, Litt.D.	
Do	Muhlenberg College	Men	John A. W. Haas, D.D.	Isaac M. Wright, Pd.D.
Annville	Lebanon Valley College	Coed	George D. Gossard, D. D.	S. O. Grimm, A. M.
Beatty	St. Vincent College	Men	Leander Schnerr, D.D.	
Beaver	Beaver College	Women	Horace B. Haskell, D. D.	C. Mace Thomas, Ph.D.
Beaver Falls	Geneva College	Coed	R. H. Martin, B. D.	Harry H. Wylie, A. M.
Bethlehem	Moravian College	Men	J. Taylor Hamilton, D. D.	
Do	Moravian Seminary and College for Women.	Women	John H. Clewell, Ph. D.	Percy Hughes, Ph. D.

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
PENNSYLVANIA—continued.				
Bryn Mawr......	Bryn Mawr College......	Women.	Miss M. Carey Thomas, LL. D.	Matilde Castro, Ph.D.
Carlisle...........	Dickinson College.......	Coed....	James H. Morgan, LL. D.	W. H. Norcross, A. M.
Chambersburg...	Wilson College..........	Women.	Ethelbert D. Warfield, LL. D.	Elsie Murray, Ph. D.
Chester...........	Pennsylvania Military College.	Men.....	Chas. E. Hyatt, LL.D.	
Collegeville......	Ursinus College.........	Coed....	George L. Omwake, Ed. D.	
Easton...........	Lafayette College........	Men.....	John H. MacCracken, LL. D.	
Gettysburg......	Pennsylvania College...	Coed....	William A. Granville, LL. D.	C. F. Sanders, D. D.
Greenville........	Thiel College............	Coed....	Henry W. Elson, Ph. D.	C. B. Wakefield, D. D.
Grove City.......	Grove City College......	Coed....	Weir C. Ketler, A. M.	Charles A. Platt, Ph. D.
Haverford........	Haverford College.......	Men.....	William W. Comfort, Ph. D.	
Huntingdon.....	Juniata College..........	Coed....	I. Harvey Brumbaugh, A. M.	C. C. Ellis, Ph. D.
Lancaster........	Franklin and Marshall College.	Men.....	Henry H. Apple, LL. D.	H. M. J. Klein, Ph. D.
Lewisburg........	Bucknell University....	Coed....	John H. Harris, LL.D.	Llewellyn Phillips, D.D.
Lincoln University.	Lincoln University (colored.)	Men.....	John B. Rendall, D.D.	George Johnson, Ph. D.
Meadville........	Allegheny College.......	Coed....	Wm. H. Crawford, LL. D.	Frederick G. Henke, Ph. D.
Mechanicsburg...	Irving Female College...	Women.	E. E. Campbell, Ph. D.	
Myerstown......	Albright College.........	Coed....	L. Clarence Hunt, D. D.	C. A. Bowman, Ph D.
New Wilmington	Westminster College....	Coed....	W. C. Wallace, D. D..	John A. Shott, A. M.
Philadelphia.....	Drexel Institute.........	Coed....	Hollis Godfrey, Sc. D..	
Do............	Dropsie College..........	Coed....	Cyrus Adler, Ph. D...	
Do............	La Salle College.........	Men.....	Brother Richard, A. M.	
Do............	St. Joseph's College.....	Men.....	Redmond J. Walsh, S. J.	
Do............	Temple University......	Coed....	Russell H. Conwell, LL. D.	John A. Lesh, Ph. D.
Do............	University of Pennsylvania.	Coed....	Edgar Fahs Smith, LL. D., provost.	Frank P. Graves, LL. D
Pittsburgh.......	Carnegie Institute of Technology.	Coed....	Arthur A. Hamerschlag, LL D.	Walter V. Bingham, Ph. D.
Do............	Duquesne University of the Holy Ghost.	Men.....	Martin A. Hehir, LL. D.	
Do............	Pennsylvania College for Women.	Women.	John C. Acheson, LL. D.	George B. Lawson, Ph.D.
Do............	University of Pittsburgh.	Coed....	Samuel B. McCormick, LL.D., chancellor.	Will G. Chambers, A. M.
Selinsgrove.......	Susquehanna University	Coed....	Charles T. Aikens, D.D.	
South Bethlehem	Lehigh University......	Men.....	Henry S. Drinker, LL. D.	Percy Hughes, Ph. D.
State College.....	Pennsylvania State College.	Coed....	Edwin E. Sparks, D. LL.	David A. Anderson, Ph. D.
Swarthmore......	Swarthmore College.....	Coed....	Joseph Swain, LL. D..	Sturgiss B. Davis, A. M.
Villanova........	Villanova College........	Men.....	James J. Dean, A. M..	Joseph A. Hickey, A. M.
Washington......	Washington and Jefferson College.	Men	Frederick W. Hinitt, LL. D.	Edward M. Weyer, Ph. D.
Waynesburg.....	Waynesburg College.....	Coed....	J. W. McKay, LL. D..	J. H. Edgerton, A. M.
PORTO RICO.				
San Juan........	University of Porto Rico	Coed....	Paul G. Miller, Ph. D.	Susan D. Huntington, A. M.
RHODE ISLAND.				
Kingston.........	Rhode Island State College.	Coed....	Howard Edwards, LL. D.	Lester W. Boardman, A. M.
Providence.......	Brown University.......	Coed....	W. H. P. Faunce, LL. D.	Walter B. Jacobs, A. M.

XVII.—Universities and Colleges—Presidents and Heads of Departments of Education—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
SOUTH CAROLINA.				
Charleston	College of Charleston	Men	Harrison Randolph, LL. D.	
Do	The Citadel, the Military College of South Carolina.	Men	Col. O. J. Bond, A. M., superintendent.	
Clemson College	Clemson Agricultural College.	Men	Walter M. Riggs, LL. D.	Verd Peterson, A. B.
Clinton	Presbyterian College of South Carolina.	Coed	Davison McD. Douglas, D. D.	Daniel J. Brimm, D. D.
College Place	Columbia College	Women	G. T. Pugh. Ph. D	J. P. Patton, A. M.
Columbia	Benedict College (colored).	Coed	B. W. Valentine, A. M.	
Do	Chicora College for Women.	Women	S. C. Byrd, D. D	Mary E. Armstrong, A. B.
Do	University of South Carolina.	Coed	Wm. S. Currell, LL. D.	Patterson Wardlaw, LL. D.
Due West	Erskine College	Coed	James S. Moffatt, D. D.	
Do	Woman's College of Due West.	Women	Richard L. Robinson, D. D.	
Greenville	Furman University	Men	Edwin McNeil Poteat, LL. D.	Orlin O. Fletcher, D. D.
Do	Greenville Female College.	Women	David M. Ramsey, D. D.	
Greenwood	Lander College	Women	John O. Willson, D. D.	Elizabeth Alexander, A. B.
Hartsville	Coker College for Women	Women	Howard Lee Jones, D. D.	
Newberry	Newberry College	Coed	S. J. Derrick, A. M	
Spartanburg	Converse College	Women	Robert P. Pell, Litt. D.	M. A. Martin, Ph. D.
Do	Wofford College	Men	Henry N. Snyder, LL. D.	Arthur G. Rembert, LL. D.
SOUTH DAKOTA.				
Brookings	South Dakota State College of Agriculture and Mechanic Arts.	Coed	Ellwood C. Perisho, LL. D.	Charles H. Brady, A. M.
Huron	Huron College	Coed	Harry M. Gage, LL. D.	Walter L. Harris, A. M.
Mitchell	Dakota Wesleyan University.	Coed	W. D. Schermerhorn, D. D.	H. P. Patterson, Ph. D.
Rapid City	State School of Mines	Coed	Cleophas C. O'Hara, Ph. D.	
Sioux Falls	Sioux Falls College	Coed	D. F. Charles	A. W. Fauquet, A. M.
Vermilion	University of South Dakota.	Coed	Robert L. Slagel, Ph. D.	W. F. Jones, Ph. D.
Yankton	Yankton College	Coed	Henry K. Warren, LL. D.	M. A. Stewart, Ph. D.
TENNESSEE.				
Bristol	King College	Men	Tilden Scherer, D. D	K. A. Hagy, A. M.
Chattanooga	University of Chattanooga.	Coed	Frederick W. Hixon, D. D.	W. W. Hooper, D. D.
Clarksville	Southwestern Presbyterian University.	Men	Chas. E. Diehl, D. D	Wm. Dinwiddie, LL. D.
Greenville	Tusculum College	Coed	Chas. O. Gray, D. D	Edward A. Hirschman, Ph. B.
Harrogate	Lincoln Memorial University.	Coed	George A. Hubbell, Ph. D.	Thomas B. Ford, A. M.
Jackson	Union University	Coed	G. M. Savage, LL. D	A. T. Barrett, LL. D.
Jefferson City	Carson and Newman College.	Coed	Wm. L. Gentry, B. S	
Knoxville	Knoxville College (colored).	Coed	J. K. Giffin, A. B	
Do	University of Tennessee.	Coed	Brown Ayres, LL. D	John A. Thackston, Ph. D.
Lebanon	Cumberland University.	Coed	Edward P. Childs, A. M.	
McKenzie	Bethel College	Coed	N. J. Finney, A. M	
Maryville	Maryville College	Coed	Samuel T. Wilson, D. D.	Jasper C. Barnes, Ph. D.
Memphis	Christian Brothers College.	Men	Brother John, A. M	
Milligan	Milligan College	Coed	H. J. Derthick, A. M	Willis B. Boyd, A. M.
Murfreesboro	Tennessee College	Women	Geo. J. Burnett, A. M	C. M. Faithfull, A. M.

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
TENNESSEE—con.				
Nashville	Fisk University (colored).	Coed	Fayette A. McKenzie, Ph. D.	**Belle R. Parmenter, B. Ped.**
Do	George Peabody College for Teachers.	Coed	Bruce R. Payne, Ph. D.	
Do	Vanderbilt University	Coed	James H. Kirkland, LL. D., chancellor.	
Ruskin	Ruskin-Cave College	Coed		
Sewanee	University of the South	Men	Albion W. Knight, D. D., vice chancellor.	
Spencer	Burritt College	Coed	W. S. Graves, A. M.	
Washington College.	Washington College	Coed	James T. Cooter, D. D.	**Wm. J. Wilkinson, B. L.**
TEXAS.				
Abilene	Simmons College	Coed	Jefferson D. Sandefer, Ph. B.	**Oscar H. Cooper, LL. D.**
Austin	University of Texas	Coed	Robert E. Vinson, LL. D.	**Wm. S. Sutton, LL. D.**
Belton	Baylor Female College	Women	John C. Hardy, LL. D.	**Payton Jacobs, A. M.**
Brownwood	Daniel Baker College	Coed	Tinsley P. Junkin, LL. D.	
Do	Howard Payne College	Coed	Judson A. Tolman, Ph. D.	
College Station	Agricultural and Mechanical College of Texas.	Men	Wm. B. Bizzell, D. C. L.	**Martin L. Hayes, A. M.**
Dallas	Southern Methodist University.	Coed	Robert S. Hyer, LL. D.	**Paul W. Terry, A. M.**
Denton	College of Industrial Arts	Women	F. M. Bralley, A. B.	**R. J. Turrentine, A. M.**
Fort Worth	Texas Woman's College.	Women	J. D. Young, LL. B.	**Elzy D. Jennings, A. M.**
Do	Texas Christian University.	Coed	W. B. Parks, Ph. D., acting.	**W. H. Batson, Ph. D.**
Georgetown	Southwestern University	Coed	Charles M. Bishop, D. D.	**Claude A. Nichols, Ph. D.**
Houston	Rice Institute	Coed	Edgar O. Lovett, LL. D.	**R. A. Tsanoff, Ph. D.**
San Antonio	St. Louis College	Men	A. Frische, S. M.	
Sherman	Austin College	Men	Thomas S. Clyce, LL. D.	**J. J. Delaney, A. M.**
Tehuacana	Westminster College	Coed	John C. Williams, D. D	
Waco	Baylor University	Coed	Samuel P. Brooks, LL. D.	**A. J. Hall, Ph. D.**
Waxahachie	Trinity University	Coed	Samuel Lee Hornbeak, LL. D.	**W. M. Liggett, A. M.**
UTAH.				
Logan	Agricultural College of Utah.	Coed	E. G. Peterson, Ph. D.	
Salt Lake City	University of Utah	Coed	John A. Widtsoe, LL. D.	**Milton Bennion, A. M.**
VERMONT.				
Burlington	University of Vermont and State Agricultural College.	Coed	Guy P. Benton, LL.D.	**James F. Messenger, Ph. D.**
Middlebury	Middlebury College	Coed	John Martin Thomas, LL. D.	**Raymond McFarland, A. M.**
Northfield	Norwich University	Men	Herbert R. Roberts, D. C. L., acting.	
Winooski	St. Michael's College	Men	E. M. Salmon, D. D	
VIRGINIA.				
Abingdon	Martha Washington College.	Women	Samuel D. Long, A. B.	
Ashland	Randolph-Macon College.	Men	Robert E. Blackwell, LL. D.	
Blacksburg	Virginia Agricultural and Mechanical College and Polytechnic Institute.	Men	Joseph D. Eggleston, A. M.	
Bridgewater	Bridgewater College	Coed	John S. Flory, Ph. D.	**P. H. Bowman, D. D.**
Charlottesville	University of Virginia	Men	Edwin A. Alderman, LL. D.	**W. H. Heck, Ph. D.**

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
VIRGINIA—con.				
Emory	Emory and Henry College.	Men	Chas. C. Weaver, Ph. D.	
Hampden-Sidney	Hampden-Sidney College.	Men	A. W. McWhorter, Ph. D., acting.	
Hollins	Hollins College	Women.	Matty L. Cocke	
Lexington	Virginia Military Institute.	Men	Edward W. Nichols, supt.	
Do	Washington and Lee University.	Men	Henry Louis Smith, LL. D.	
Lynchburg	Randolph-Macon Woman's College.	Women.	Wm. A. Webb, LL. D.	E. B. Crooks, Ph. D.
Do	Virginia Christian College.	Coed	J. T. T. Hundley, A. B.	
Manassas	Eastern College	Coed	Hervin U. Roop, LL. D.	
Richmond	Richmond College	Coed	F. W. Boatwright, LL. D.	D. B. Bryan, Ped. D.
Do	Virginia Union University (colored).	Men	George R. Hovey, D. D.	M. P. Robinson, A. B.
Salem	Roanoke College	Men	John A. Morehead, D. D.	F. V. N. Painter, Litt.D.
Do	Elizabeth College	Women.	John C. Peery, A. M.	Irene B. Palmer.
Sweet Briar	Sweet Briar College	Women.	Emilie W. McVea, Litt. D.	
Williamsburg	College of William and Mary.	Men	Lyon G. Tyler, LL. D.	C. H. Hatz, Ph. D.
WASHINGTON.				
Pullman	State College of Washington.	Coed	Ernest O. Holland, Ph. D.	Alfred A. Cleveland, Ph. D.
Seattle	University of Washington.	Coed	Henry Suzzallo, Ph. D.	Frederick E. Bolton, Ph. D.
Spokane	Gonzaga University	Men	James M. Brogan, S. J.	
Tacoma	College of Puget Sound	Coed	Edward H. Todd, D.D	O. E. Reynolds, A. M.
Walla Walla	Whitman College	Coed	Stephen B. L. Penrose, D. D.	
WEST VIRGINIA.				
Bethany	Bethany College	Coed	Thomas E. Cramblet, LL. D.	W. H. Cramblet, Ph. D.
Buckhannon	West Virginia Wesleyan College.	Coed	Wallace B. Fleming, D. D.	B. F. Haught, A. M.
Elkins	Davis and Elkins College.	Coed	James E. Allen, A. B.	Florence A. Kellogg, A. M.
Morgantown	West Virginia University.	Coed	Frank B. Trotter, LL. D.	Jasper N. Deahl, Ph. D.
WISCONSIN.				
Appleton	Lawrence College	Coed	Samuel Plantz, LL. D.	Lester B. Rogers, Ph. D.
Beloit	Beloit College	Coed	Melvin A. Brannon, LL. D.	Almon W. Burr, A. M.
Madison	University of Wisconsin.	Coed	Edward A. Birge, LL. D.	V. A. C. Henmon, Ph. D.
Milton	Milton College	Coed	Wm. C. Daland, D.D.	
Milwaukee	Marquette University	Men	Herbert C. Noonan, S. J.	
Do	Milwaukee-Downer College.	Women.	Ellen C. Sabin, LL. D.	Mina Kerr, Ph. D.
Plymouth	Mission House	Coed	E. A. Hofer, D. D.	
Prairie du Chien	Campion College	Men	Albert C. Fox, S. J.	
Ripon	Ripon College	Coed	H. C. Culbertson, LL. D.	Wm. J. Mutch, Ph. D.
Sinsinawa	St. Clara College and Academy.	Women.	Mother Mary Samuel	Sister M. Ruth, Ph. D.
Watertown	Northwestern College	Men	August F. Ernst, Ph. D.	
Waukesha	Carroll College	Coed	Herbert P. Houghton, Ph. D.	S. B. Ray, L. H. D.
WYOMING.				
Laramie	University of Wyoming.	Coed	Aven Nelson, Ph. D.	J. E. Bullern.

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
MAINE—contd.				
Orono	University of Maine	Coed	Robert J. Aley, LL. D.	Wm. E. Fuller, A. M., Ph. D.
Van Buren	Van Buren College (St. Mary's).	Men	C. J. Barth	
Waterville	Colby College	Coed	Arthur J. Roberts, A. M.	
MARYLAND.				
Annapolis	St. John's College	Men	Thomas Fell, LL. D.	
Do	United States Naval Academy.	Men	Capt. Edward W. Eberle superintendent.	
Baltimore	Goucher College	Women	Wm. W. Guth, Ph. D.	Agnes L. Rogers, Ph. D.
Do	Johns Hopkins University.	Coed	Frank J. Goodnow, LL. D.	Edward F. Buchner, Ph. D.
Do	Morgan College (colored)	Coed	John O. Spencer, Ph. D.	Wm. Pickens, Litt. D.
Do	Mount St. Joseph's College.	Men	Brother James, A. B.	
Do	Notre Dame College of Maryland.	Women	Sister Mary Florentine	
Chestertown	Washington College	Coed		
College Park	Maryland State College of Agriculture.	Men	Alfred F. Woods, D. Agr.	H. F. Cotterman, A. M.
Ellicott City	Rock Hill College	Men	Brother Pius, A. B.	
Emmitsburg	Mount St. Mary's College.	Men	Bernard J. Bradley, LL. D.	
Frederick	Hood College	Women	Joseph H. Apple, LL. D.	Benj. W. Daily, A. M.
Lutherville	Maryland College for Women.	Women	Beekman O. Rouse, A. B.	
New Windsor	Blue Ridge College	Coed	F. F. Holsopple, L. H. D.	
Westminister	Western Maryland College.	Coed	Thomas H. Lewis, LL. D.	Walter F. Clayton, Ph. D.
MASSACHUSETTS.				
Amherst	Amherst College	Men	Alexander Meiklejohn, Ph. D.	
Do	Massachusetts Agricultural College.	Coed	Kenyon L. Butterfield, LL. D.	Wm. R. Hart, A. M.
Boston	Boston University	Coed	Lemuel H. Murlin, D. D.	Arthur H. Wilde, Ph. D.
Do	Simmons College	Women	Henry Lefavour, LL. D.	Sarah L. Arnold, A. M.
Cambridge	Harvard University	Men	Abbott Lawrence Lowell, LL. D.	Henry W. Holmes, A. M.
Do	Massachusetts Institute of Technology.	Coed	Richard C. Maclaurin, LL. D.	
Do	Radcliffe College	Women	Le Baron R. Briggs, LL. D.	Henry W. Holmes, A. M.
Chestnut Hill	Boston College	Men	Charles W. Lyons, S. J.	
Lowell	Lowell Textile School		Chas. H. Eames, B. S.	
Northampton	Smith College	Women	William A. Neilson, LL. D.	Harvey G. Townsend, Ph. D.
Norton	Wheaton College	Women	Samuel V. Cole, LL.D.	Walter O. McIntire, Ph. D.
South Hadley	Mount Holyoke College	Women	Mary E. Woolley, LL. D.	Colin A. Scott, Ph. D.
Springfield	International Young Men's Christian Association College.	Men	Lawrence L. Doggett, D. D.	
Tufts College	Tufts College	Coed	Hermon C. Bumpus, LL. D.	Karl Schmidt, Ph. D.
Wellesley	Wellesley College	Women	Ellen F. Pendleton, LL. D.	Arthur O. Norton, A. M.
Williamstown	Williams College	Men	Harry A. Garfield, LL. D.	
Worcester	Clark University	Men	G. Stanley Hall, LL. D.	Wm. H. Burnham, Ph. D.
Do	Clark College	Men	Edmund Clark Sanford, LL. D.	Ludwig R. Geissler, Ph. D.
Do	College of the Holy Cross.	Men	Joseph N. Dinand, S.J.	James A. Mullen, S. J.
Do	Worcester Polytechnic Institute.	Men	Ira N. Hollis, Sc. D.	

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
MICHIGAN.				
Adrian	Adrian College	Coed	Harlan L. Feeman, D. D.	O. R. Stilson, A. M.
Albion	Albion College	Coed	Samuel Dickie, LL. D.	Delos Fall, LL. D.
Alma	Alma College	Coed	Harry Means Crooks, A. B.	George B. Randels, Ph. D.
Ann Arbor	University of Michigan	Coed	Harry B. Hutchins, LL. D.	Allen S. Whitney, A. B.
Berrien	Emmanuel Missionary College.	Coed	Frederick Griggs.	
Detroit	University of Detroit	Men	Wm. T. Doran, S. J.	Simon J. Nicolas, S. J.
East Lansing	Michigan Agricultural College.	Coed	Frank S. Kedzie, Sc. D.	Walter H. French, M. S.
Hillsdale	Hillsdale College	Coed	Joseph W. Mauck, LL. D.	W. H. Mack.
Holland	Hope College	Coed	Edward D. Dimnent, A. M.	Carl J. Knock, Ph. D.
Houghton	Michigan College of Mines.	Men	Fred W. McNair, Sc. D.	
Kalamazoo	Kalamazoo College	Coed	Herbert L. Stetson, LL. D.	
Olivet	Olivet College	Coed	Theodore H. Wilson, A. M.	Olga O. Latham, A. M.
MINNESOTA.				
Collegeville	St. John's University	Men	Peter Engle, Ph. D.	Kilian Held, A. M.
Minneapolis:	Augsburg Seminary	Men	George Sverdrup, M. A.	
Do	University of Minnesota.	Coed	Marion Le Roy Burton, LL. D.	Lotus D. Coffman, Ph. D.
Northfield	Carleton College	Coed	Donald J. Cowling, Ph. D.	Leal A. Headley, Ph. D.
Do	St. Olaf College	Coed	L. W. Boe, A. B.	Julius Boraas, Ph. D.
St. Paul	College of St. Catherine	Women.	Sister Antonia, A. M.	Sister Ste. Helene, A. M.
Do	College of St. Thomas	Men	Humphrey Moynihan, D. D.	Joseph A. Schabert, A. M.
Do	Hamline University	Coed	Samuel F. Kerfoot, D. D.	George S. Innis, Ph. D.
Do	Macalester College	Coed	Elmer A. Bess, D. D.	Andrew W. Anderson, A. M.
St. Peter	Gustavus Adolphus College.	Coed	Oscar J. Johnson, B. D.	S. L. Reed, Ph. D.
Winona	College of St. Teresa	Women.	Mother M. Leo Tracy	Mary A. Molloy, Ph. D.
MISSISSIPPI.				
Agricultural College.	Mississippi Agricultural and Mechanical College.	Coed	W. H. Smith	James V. Bowen, Ph. B.
Blue Mountain	Blue Mountain College	Women.	W. J. Lowrey, LL. D.	O. G. Davis, B. D.
Brookhaven	Whitworth Female College.	Women.	I. W. Cooper, D. D.	
Clinton	Mississippi College	Men	John W. Provine, LL. D.	Wm. H. Weathersby, A. M.
Columbus	Mississippi Industrial Institute and College.	Women.	Henry L. Whitfield, LL. D.	Anne L. Fant, A. M.
Grenada	Grenada College	Women.	J. R. Countiss, A. B.	
Holly Springs	Rust College (colored)	Coed	George Evans, D. D.	Emma H. Gifford, B. S.
Jackson	Belhaven College	Women.	W. H. Frazer, D. D.	Olive M. Jones, A. B.
Do	Millsaps College	Coed	Alexander F. Watkins, D. D.	Stuart G. Noble, Ph. D.
Meridian	Meridian College	Coed	J. W. Beeson, LL. D.	J. A. Smith, A. M.
University	University of Mississippi.	Coed	Joseph N. Powers, LL. D., chancellor.	R. W. Rogers, A. M.
MISSOURI.				
Cameron	Missouri Wesleyan College.	Coed	Cameron Harmon, D. D.	Emily Dexter, A. M.
Canton	Culver-Stockton College.	Coed	John H. Wood, D. D.	George E. Breece, A. M.
Columbia	University of Missouri	Coed	Albert Ross Hill, LL. D.	Jesse H. Coursault, Ph. D.
Fayette	Central College	Coed	Paul H. Linn, D. D.	Roy C. Holl, A. B.
Fulton	Westminister College	Men	E. E. Reed, D. D.	
Lexington	Central College for Women.	Women.	Z. M. Williams, D. D.	Nelle M. Ward, A. M.
Liberty	William Jewell College	Men	John P. Greene, LL. D.	W. O. Lewis, Ph. D.
Marshall	Missouri Valley College.	Coed	Wm. H. Black, LL. D.	John J. Dynes, A. M.
Parkville	Park College	Coed	Frederick W. Hawley, D. D.	W. A. Cook, A. M.

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
MISSOURI—con.				
St. Louis	St. Louis University	Men	Bernard J. Otting, S. J.	
Do	Washington University	Coed	Frederic A. Hall, LL. D., chancellor.	Edgar J. Swift, Ph. D.
Springfield	Drury College	Coed	Thomas W. Nadal, Ph. D.	Joseph T. Williams, Ph. D.
Tarkio	Tarkio College	Coed	Joseph A. Thompson, D. D.	
Warrenton	Central Wesleyan College.	Coed	Otto E. Kriege, D. D.	Frank O. Spohrer, B. S.
MONTANA.[1]				
Bozeman	Montana College of Agriculture and Mechanic Arts.	Coed	J. M. Hamilton, M. S.	M. J. Abbey, A. B.
Butte	Montana State School of Mines.	Coed	Charles H. Bowman, M. S.	
Missoula	University of Montana	Coed	Edward O. Sisson, Ph. D.	
NEBRASKA.				
Bellevue	Bellevue College	Coed	David R. Kerr	
Bethany	Cotner University	Coed	Andrew D. Harmon, A. M.	Mrs. A. O. Thomas.
College View	Union College	Coed	Harry A. Morrison, A. M.	M. P. Robinson.
Crete	Doane College	Coed	Wm. O. Allen, Ph. D.	A. G. Heyhoe, A. M.
Grand Island	Grand Island College	Coed	Edward F. Jorden, D. D.	George Sutherland, D. D.
Hastings	Hastings College	Coed	R. B. Crone, Ph. B	F. E. Weyer, A. M.
Lincoln	University of Nebraska[2]	Coed	Samuel Avery, LL. D., chancellor.	Charles Fordyce, Ph. D.
Omaha	Creighton University	Men	F. X. McMenamy, S. J.	Robert M. Kelley, S. J.
Do	University of Omaha	Coed	Daniel E. Jenkins, Ph. D.	P. R. Stevenson, A. M.
University Place.	Nebraska Wesleyan University.	Coed	Isaac B. Schreckengast, S. T. B.	B. E. McProud, A. M.
York	York College	Coed	M. O. McLaughlin, D. D.	Guy Buswell, A. M.
NEVADA.				
Reno	State University of Nevada.	Coed	Walter E. Clark, Ph. D.	James Reed Young, A. M., acting
NEW HAMPSHIRE.				
Durham	New Hampshire College of Agriculture and Mechanic Arts.	Coed	Ralph D. Hetzel, LL. B.	Charles L. Simmers, B. A.
Hanover	Dartmouth College	Men	Ernest M. Hopkins, LL. D.	
Manchester	St. Anselm's College	Men	Abbot Ernest, O. S. B.	
NEW JERSEY.				
Convent Station.	College of St. Elizabeth	Women	Sister Mary Pauline, LL. D.	Sister Regina Clare, B. S.
Hoboken	Stevens Institute of Technology.	Men	Alexander C. Humphreys, LL. D.	
Jersey City	St. Peter's College	Men	James F. McDermott, S. J.	
Kenilworth	Upsala College	Coed	Peter Froeberg, B. D.	
New Brunswick	Rutgers College	Men	Wm. H. S. Demarest, LL. D.	Charles H. Elliott, Ph. D.
Princeton	Princeton University	Men	John Grier Hibben, LL. D.	
South Orange	Seton Hall College	Men	Jas. F. Mooney, LL. D.	
NEW MEXICO.				
Albuquerque	University of New Mexico.	Coed	David R. Boyd, Ph. D.	Charles E. Hodgin, B. Pd.
Socorro	New Mexico School of Mines.	Coed	A. X. Illinski, Met. E.	
State College	New Mexico College of Agriculture and Mechanic Arts.	Coed	Austin D. Crile	John H. Vaughan, A. M.

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[1] Chancellor of the University of Montana, Edward C. Elliot, Ph. D.

[2] *Graduate School of Education, G. W. A. Luckey, Ph. D.*

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
NEW YORK.				
Albany	New York State College for Teachers.	Coed	A. R. Brubacher, Ph. D.	Leonard A. Blue, Ph. D.
Alfred	Alfred University	Coed	Boothe C. Davis, LL. D.	Ford S. Clarke, Ph. B.
Annandale	St. Stephen's College	Men	Wm. C. Rodgers, D. D.	
Aurora	Wells College	Women	Kerr D. Macmillan, S. T. D.	
Brooklyn	Adelphi College	Coed	Frank D. Blodgett, LL. D.	James W. Park, A. M.
Do	College of St. Francis Xavier.	Men	Joseph H. Rockwell, S. J.	
Do	Polytechnic Institute of Brooklyn.	Men	Fred. W. Atkinson, Ph. D.	
Do	St. Francis College	Men	Brother David, O. S. F.	
Do	St. John's College	Men	John W. Moore, LL. D.	
Buffalo	Canisius College	Men	Geo. J. Krim, S. J.	
Do	University of Buffalo	Coed	Chas. P. Norton, chancellor.	Mary H. Lewis.
Canton	St. Lawrence University	Coed	Edwin L. Hulett, A. M., acting.	Charles M. Rebert, A. M.
Clinton	Hamilton College	Men	Frederick C. Ferry, LL. D.	William H. Squires, Ph. D.
Elmira	Elmira College	Women	Frederick Lent, Ph. D.	John R. Tuttle, Ph. D.
Geneva	Hobart College	Coed	Lyman P. Powell, A. B.	
Hamilton	Colgate University	Men	Elmer B. Bryan, LL. D.	Melbourne S. Read, Ph D.
Ithaca	Cornell University	Coed	Jacob G. Schurman, LL. D.	George P. Bristol, A. M.
New Rochelle	College of New Rochelle.	Women	Joseph F. Mooney, D. D.	M. M. Xavier, A. M.
New York	Barnard College	Women	Virginia C. Gildersleeve, Ph. D., dean.	
Do	College of the City of New York.	Men	Sidney E. Mezes, LL. D.	Stephen P. Duggan, Ph. D.
Do	Columbia University	Coed	Nicholas M. Butler, LL. D.	(1)
Do	Fordham University	Men	Jos. A. Mulry, Ph. D.	
Do	Hunter College of the City of New York.	Women	George S. Davis, LL. D.	James M. Kieran, LL. D.
Do	Manhattan	Men	Brother Edward, A. B.	F. J. Plattler, A. M.
Do	New York University	Coed	Elmer Ellsworth Brown, LL. D., chancellor.	Thomas M. Balliet, Ph. D.
Do	Teachers College	Coed	James E. Russell, LL. D., dean.	
Niagara University.	Niagara University	Men	Wm. F. Likly, C. M.	
Potsdam	Clarkson College of Technology.	Men	John P. Brooks, Sc. D., director.	
Poughkeepsie	Vassar College	Women	Henry N. MacCracken, LL. D.	
Rochester	University of Rochester.	Coed	Rush Rhees, LL. D.	George M. Forbes, LL. D.
St. Bonaventure.	St. Bonaventure's College.	Men	Alexander M. Hickey, Ph. D.	
Schenectady	Union University	Men	Charles A. Richmond, LL. D.	
Syracuse	New York State College of Forestry (at Syracuse University).	Men	Hugh P. Baker, M. F., dean.	
Do	Syracuse University	Coed	James R. Day, LL. D., chancellor.	Mark E. Penney, Ph. D.
Troy	Rensselaer Polytechnic Institute.	Men	Palmer C. Ricketts, LL. D.	
Do	Russell Sage College of Practical Arts.	Women	Eliza Kellas, Ph. B.	
West Point	United States Military Academy.	Men	Col. Samuel E Tillman, supt.	
NORTH CAROLINA.				
Asheville	St. Genevieve's College and Academy.	Women	Mother M. L. Lorin	
Belmont	Belmont Abbey College.	Men	Leo Haid, D. D.	
Chapel Hill	University of North Carolina.	Coed		Marcus C. S. Noble, Ph. D.
Charlotte	Biddle University (colored).	Men	H. L. McCrorey, D. D.	
Do	Queens College	Women	Henry C. Evans, D. D	

[1] See Teachers College.

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
NORTH CAROLINA—con.				
Davidson	Davidson College	Men	Wm. J. Martin, Ph. D.	Archibald Currie, A. M.
Durham	Trinity College	Coed	Wm. P. Few, LL D.	Eugene C. Brooks, Lit. D.
Elon College	Elon College	Coed	Wm. A. Harper, LL.D.	W. C. Wicker, Litt. D.
Greensboro	Greensboro College for Women.	Women	S. B. Turrentine, D. D.	David F. Nicholson, A. M.
Guilford College	Guilford College	Coed	Raymond Binford, Ph. D.	
Hickory	Lenoir College	Coed	R. L. Fritz, D. D	S. P. Schneider, A. M.
Raleigh	Meredith College	Women	Charles E. Brewer, Ph. D.	Mary Shannon Smith, A. M.
Do	Peace Institute	Women	Mary O. Graham	Ada V. Womble.
Do	St. Mary's School	Women	Warren W. Way	
Do	Shaw University (colored).	Coed	Chas. F. Meserve, LL. D.	
Red Springs	Flora Macdonald College	Women	C. G. Vardell, D. D	
Salisbury	Livingstone College (colored).	Coed	D. C. Suggs, Ph. D.	W. H. Hannum, A. M.
Wake Forest	Wake Forest College	Men	Wm. L. Poteat, LL.D.	T. E. Cochran, A. M.
West Raleigh	North Carolina State College of Agriculture and Engineering.	Men	W. C. Riddick, LL. D.	Thomas E. Browne, A. B.
Wilson	Atlantic Christian College.	Coed	Raymond A. Smith, A. M.	F. F. Grim, A. M.
Winston-Salem	Salem Academy and College.	Women	Howard E. Rondthaler, D. D.	Edwin J. Heath, B. D.
NORTH DAKOTA.				
Agricultural College.	North Dakota Agricultural College.	Coed	Edwin F. Ladd, LL. D.	Arland D. Weeks, A. M.
Fargo	Fargo College	Coed	E. Lee Howard, D. D.	Anna M. Tibbets, Ph. D.
Jamestown	Jamestown College	Coed	Barend H. Kroeze, D. D.	Francis B. Taylor, Ph. D.
University	University of North Dakota.	Coed	Thomas F. Kane, LL D	Joseph Kennedy, LL. D.
OHIO.				
Ada	Ohio Northern University.	Coed	Albert E. Smith, D. D.	John Davison, D. Ped.
Akron	Municipal University of Akron.	Coed	Parke R. Kolbe, Ph. D.	
Alliance	Mount Union College	Coed	Wm. H. McMaster, D. D.	John B. Bowman, A. M.
Ashland	Ashland College	Coed	Wm. D. Furry, Ph. D.	Edward Byers, A. M.
Athens	Ohio University	Coed	Alston Ellis, LL. D.	John J. Richeson, D. Ped.
Berea	Baldwin-Wallace College.	Coed	A. B. Storms	Fletcher D. Ward, M.
Bluffton	Bluffton College	Coed	Samuel K. Mosiman, Ph. D.	Harry G. Good, Ph. D.
Cedarville	Cedarville College	Coed	Wilbert R. McChesney, D D.	Arthur St. C. Sloan, A. B
Cincinnati	St. Xavier College	Men	James McCabe, S. J.	
Do	University of Cincinnati.	Coed	Chas. W. Dabney, LL. D	Wm. P. Burris, L. H. D.
Cleveland	Case School of Applied Science.	Men	Charles S. Howe, Ph. D.	
Do	St. Ignatius College	Men	Wm. B. Sommerhouser, S. J.	
Do	Western Reserve University.	Coed	Charles F. Thwing, LL. D.	
Columbus	Capital University	Men	Otto Mees, A. M	
Do	Ohio State University	Coed	Wm. O. Thompson, LL. D.	George W. Knight, Ph. D.
Dayton	St. Mary College	Men	Bernard P. O'Reilly, D. D.	
Defiance	Defiance College	Coed	Albert G. Caris, Litt. D.	E. L. Lawson, A. M.
Delaware	Ohio Wesleyan University.	Coed	John W. Hoffman, LL. D.	Arthur R. Mead, A. M.
Findlay	Findlay College	Coed	Wm. H. Guyer, D. D.	H. S. Brinser, M. Pd.
Gambier	Kenyon College	Men	Wm. F. Peirce, L.H.D.	
Granville	Denison University	Coed	Clark W. Chamberlain, Ph. D.	T. A. Lewis, Ph. D.
Hiram	Hiram College	Coed	Miner Lee Bates, LL. D.	M. R. Gabbert, A. M.

XVII.—UNIVERSITIES AND COLLEGES—PRESIDENTS AND HEADS OF DEPARTMENTS OF EDUCATION—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
OHIO—continued.				
Marietta	Marietta College	Coed	George W. Hinman, Ph. D.	Jesse V. McMillan, A. M.
New Athens	Franklin College	Coed	Will M. Hughes, D. D.	W. R. Cornetet, B. S.
New Concord	Muskingum College	Coed	J. K. Montgomery, D. D.	J. G. Lowery, A. M.
Oberlin	Oberlin College	Coed	Henry C. King, LL. D.	Edward A. Miller, Ph. D.
Oxford	Miami University	Coed	Raymond M. Hughes, M. S.	Harvey C. Minnick, LL. D.
Do	Oxford College for Women.	Women	Eleanor N. Adams, Ph. D.	Marian A. Bills, Ph. D.
Do	Western College for Women.	Women	W. W. Boyd, Ph. D.	Jay G. Hickox, B. S.
Painesville	Lake Erie College	Women	Vivian Blanche Small, LL. D.	Esther Crane, Ph. D.
Rio Grande	Rio Grande College	Coed	Simeon H. Bing, A. M.	W. G. Scarberry, A. B.
Springfield	Wittenberg College	Coed	Charles G. Heckert, D. D.	T. Bruce Birch, Ph. D.
Tiffin	Heidelberg University	Coed	Charles E. Miller, LL. D.	E. I. F. Williams, A. M.
Toledo	St. John's University	Men	Francis X. Buch, A. M.	Francis P. Kemper, A. M.
Do	Toledo University	Coed	A. Monroe Stowe, Ph. D.	A. W. Trettien, Ph. D.
Westerville	Otterbein College	Coed	Walter G. Clippinger, D. D.	Edmund A. Jones, Ph. D.
Wilberforce	Wilberforce University (colored).	Coed	Wm. S. Scarborough, LL. D.	Gilbert Jones, Ph. D.
Wilmington	Wilmington College	Coed	J. Edwin Jay, A. M.	ed C. Waters, A. M.
Wooster	College of Wooster	Coed	J. Campbell White, LL. D.	Martin Remp, A. M.
Yellowsprings	Antioch College	Coed	George D. Black, D. D.	Stephen F. Weston, Ph. D.
OKLAHOMA.				
Chickasha	Oklahoma College for Women.	Women	G. W. Austin, B. S.	I. E. Mott, A. M.
East End	Phillips University	Coed	Isaac N. McCash, LL. D.	Samuel H. Horne, A. M.
Guthrie	Methodist University of Oklahoma.	Coed	Edward Hislop, D. D.	Edwin G. Green, A. B.
Kingfisher	Kingfisher College	Coed	Henry W. Tuttle, D. D.	
Norman	University of Oklahoma.	Coed	Stratton D. Brooks, LL. D.	W. W. Phelan, Ph. D.
Stillwater	Oklahoma Agricultural and Mechanical College.	Coed	James W. Cantwell, A. M.	John H. Bowers, Ph. D.
Tulsa	Henry Kendall College	Coed	Arthur L. Odell, D. D.	
OREGON.				
Albany	Albany College	Coed	Wallace H. Lee, LL. D.	
Corvallis	Oregon Agricultural College.	Coed	William J. Kerr, Sc. D.	Edwin D. Ressler, A. M.
Eugene	University of Oregon	Coed	Prince L. Campbell, LL. D.	Henry D. Sheldon, Ph. D.
Forest Grove	Pacific University	Coed	Robert F. Clark, A. M.	Henry L. Bates, A. M.
McMinnville	McMinnville College	Coed	Leonard W. Riley, D. D.	Curtis P. Coe, A. B.
Newberg	Pacific College	Coed	Levi T. Pennington, A. B.	R. W. Lewis, Ph. B.
Portland	Reed College	Coed	Wm. T. Foster, LL. D.	Hoseph K. Hart, Ph. D.
Salem	Willamette University	Coed	Carl G. Doney, LL. D.	Charles L. Sherman, Ph. D.
PENNSYLVANIA.				
Allentown	Allentown College for Women.	Women.	Wm. F. Curtis, Litt. D.	
Do	Muhlenberg College	Men	John A. W. Haas, D. D.	Isaac M. Wright, Pd. D.
Annville	Lebanon Valley College.	Coed	George D. Gossard, D. D.	S. O. Grimm, A. M.
Beatty	St. Vincent College	Men	Leander Schnerr, D. D.	
Beaver	Beaver College	Women.	Horace B. Haskell, D. D.	C. Mace Thomas, Ph. D.
Beaver Falls	Geneva College	Coed	R. H. Martin, B. D.	Harry H. Wylie, A. M.
Bethlehem	Moravian College	Men	J. Taylor Hamilton, D. D.	
Do	Moravian Seminary and College for Women.	Women.	John H. Clewell, Ph. D.	Percy Hughes, Ph. D.

XVII.—Universities and Colleges—Presidents and Heads of Departments of Education—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
PENNSYLVANIA—continued.				
Bryn Mawr	Bryn Mawr College	Women.	Miss M. Carey Thomas, LL. D.	Matilde Castro, Ph.D.
Carlisle	Dickinson College	Coed	James H. Morgan, LL. D.	W. H. Norcross, A. M.
Chambersburg	Wilson College	Women.	Ethelbert D. Warfield, LL. D.	Elsie Murray, Ph. D.
Chester	Pennsylvania Military College.	Men	Chas. E. Hyatt, LL.D.	
Collegeville	Ursinus College	Coed	George L. Omwake, Pd. D.	
Easton	Lafayette College	Men	John H. MacCracken, LL. D.	
Gettysburg	Pennsylvania College	Coed	William A. Granville, LL. D.	C. F. Sanders, D. D.
Greenville	Thiel College	Coed	Henry W. Elson, Ph. D.	C. B. Wakefield, D. D.
Grove City	Grove City College	Coed	Weir C. Ketler, A. M.	Charles A. Platt, Ph. D.
Haverford	Haverford College	Men	William W. Comfort, Ph. D.	
Huntingdon	Juniata College	Coed	I. Harvey Brumbaugh, A. M.	C. C. Ellis, Ph. D.
Lancaster	Franklin and Marshall College.	Men	Henry H. Apple, LL. D.	H. M. J. Klein, Ph. D.
Lewisburg	Bucknell University	Coed	John H. Harris, LL.D.	Llewellyn Phillips, D.D.
Lincoln University.	Lincoln University (colored.)	Men	John B. Rendall, D.D.	George Johnson, Ph. D.
Meadville	Allegheny College	Coed	Wm. H. Crawford, LL. D.	Frederick G. Henke, Ph. D.
Mechanicsburg	Irving Female College	Women.	E. E. Campbell, Ph. D.	
Myerstown	Albright College	Coed	L. Clarence Hunt, D. D.	C. A. Bowman, Ph D.
New Wilmington	Westminster College	Coed	W. C. Wallace, D. D.	John A. Shott, A. M.
Philadelphia	Drexel Institute	Coed	Hollis Godfrey, Sc. D.	
Do	Dropsie College	Coed	Cyrus Adler, Ph. D.	
Do	La Salle College	Men	Brother Richard, A. M.	
Do	St. Joseph's College	Men	Redmond J. Walsh, S. J.	
Do	Temple University	Coed	Russell H. Conwell, LL. D.	John A. Lesh, Ph. D.
Do	University of Pennsylvania.	Coed	Edgar Fahs Smith, LL. D., provost.	Frank P. Graves, LL. D
Pittsburgh	Carnegie Institute of Technology.	Coed	Arthur A. Hamerschlag, LL D.	Walter V. Bingham, Ph. D.
Do	Duquesne University of the Holy Ghost.	Men	Martin A. Hehir, LL. D.	
Do	Pennsylvania College for Women.	Women.	John C. Acheson, LL. D.	George B. Lawson, Ph.D.
Do	University of Pittsburgh.	Coed	Samuel B. McCormick, LL.D., chancellor.	Will G. Chambers, A. M.
Selinsgrove	Susquehanna University	Coed	Charles T. Aikens, D.D.	
South Bethlehem	Lehigh University	Men	Henry S. Drinker, LL. D.	Percy Hughes, Ph. D.
State College	Pennsylvania State College.	Coed	Edwin E. Sparks, D. LL.	David A. Anderson, Ph. D.
Swarthmore	Swarthmore College	Coed	Joseph Swain, LL. D.	Sturgiss B. Davis, A. M.
Villanova	Villanova College	Men	James J. Dean, A. M.	Joseph A. Hickey, A. M.
Washington	Washington and Jefferson College.	Men	Frederick W. Hinitt, LL. D.	Edward M. Weyer, Ph. D.
Waynesburg	Waynesburg College	Coed	J. W. McKay, LL. D.	J. H. Edgerton, A. M.
PORTO RICO.				
San Juan	University of Porto Rico	Coed	Paul G. Miller, Ph. D.	Susan D. Huntington, A. M.
RHODE ISLAND.				
Kingston	Rhode Island State College.	Coed	Howard Edwards, LL. D.	Lester W. Boardman, A. M.
Providence	Brown University	Coed	W. H. P. Faunce, LL. D.	Walter B. Jacobs, A. M.

XVII.—Universities and Colleges—Presidents and Heads of Departments of Education—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
SOUTH CAROLINA.				
Charleston	College of Charleston	Men	Harrison Randolph, LL. D.	
Do	The Citadel, the Military College of South Carolina.	Men	Col. O. J. Bond, A. M., superintendent.	
Clemson College	Clemson Agricultural College.	Men	Walter M. Riggs, LL. D.	Verd Peterson, A. B.
Clinton	Presbyterian College of South Carolina.	Coed	Davison McD. Douglas, D. D.	Daniel J. Brimm, D. D.
College Place	Columbia College	Women	G. T. Pugh. Ph. D	J. P. Patton, A. M.
Columbia	Benedict College (colored).	Coed	B. W. Valentine, A. M.	
Do	Chicora College for Women.	Women	S. C. Byrd, D. D	Mary E. Armstrong, A. B.
Do	University of South Carolina.	Coed	Wm. S. Currell, LL. D.	Patterson Wardlaw, LL. D.
Due West	Erskine College	Coed	James S. Moffatt, D. D.	
Do	Woman's College of Due West.	Women	Richard L. Robinson, D. D.	
Greenville	Furman University	Men	Edwin McNeil Poteat, LL. D.	Orlin O. Fletcher, D. D.
Do	Greenville Female College.	Women	David M. Ramsey, D. D.	
Greenwood	Lander College	Women	John O. Willson, D. D.	Elizabeth Alexander, A. B.
Hartsville	Coker College for Women	Women	Howard Lee Jones, D. D.	
Newberry	Newberry College	Coed	S. J. Derrick, A. M	
Spartanburg	Converse College	Women	Robert P. Pell, Litt. D.	M. A. Martin, Ph. D.
Do	Wofford College	Men	Henry N. Snyder, LL. D.	Arthur G. Rembert, LL. D.
SOUTH DAKOTA.				
Brookings	South Dakota State College of Agriculture and Mechanic Arts.	Coed	Ellwood C. Perisho, LL. D.	Charles H. Brady, A. M.
Huron	Huron College	Coed	Harry M. Gage, LL. D.	Walter L. Harris, A. M.
Mitchell	Dakota Wesleyan University.	Coed	W. D. Schermerhorn, D. D.	H. P. Patterson, Ph. D.
Rapid City	State School of Mines	Coed	Cleophas C. O'Hara, Ph. D.	
Sioux Falls	Sioux Falls College	Coed	D. F. Charles	A. W. Fauquet, A. M.
Vermilion	University of South Dakota.	Coed	Robert L. Slagel, Ph. D.	W. F. Jones, Ph. D.
Yankton	Yankton College	Coed	Henry K. Warren, LL. D.	M. A. Stewart, Ph. D.
TENNESSEE.				
Bristol	King College	Men	Tilden Scherer, D. D	K. A. Hagy, A. M.
Chattanooga	University of Chattanooga.	Coed	Frederick W. Hixon, D. D.	W. W. Hooper, D. D.
Clarksville	Southwestern Presbyterian University.	Men	Chas. E. Diehl, D. D	Wm. Dinwiddie, LL. D.
Greenville	Tusculum College	Coed	Chas. O. Gray, D. D	Edward A. Hirschman, Ph. B.
Harrogate	Lincoln Memorial University.	Coed	George A. Hubbell, Ph. D.	Thomas B. Ford, A. M.
Jackson	Union University	Coed	G. M. Savage, LL. D	A. T. Barrett, LL. D.
Jefferson City	Carson and Newman College.	Coed	Wm. L. Gentry, B. S	
Knoxville	Knoxville College (colored).	Coed	J. K. Giffin, A. B	
Do	University of Tennessee.	Coed	Brown Ayres, LL. D	John A. Thackston, Ph. D.
Lebanon	Cumberland University.	Coed	Edward P. Childs, A. M.	
McKenzie	Bethel College	Coed	N. J. Finney, A. M	
Maryville	Maryville College	Coed	Samuel T. Wilson, D. D.	Jasper C. Barnes, Ph. D.
Memphis	Christian Brothers College.	Men	Brother John, A. M	
Milligan	Milligan College	Coed	H. J. Derthick, A. M	Willis B. Boyd, A. M.
Murfreesboro	Tennessee College	Women	Geo. J. Burnett, A. M	C. M. Faithfull, A. M.

XVII.—Universities and Colleges—Presidents and Heads of Departments of Education—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
TENNESSEE—con.				
Nashville	Fisk University (colored).	Coed	Fayette A. McKenzie, Ph. D.	**Belle R. Parmenter, B. Ped.**
Do	George Peabody College for Teachers.	Coed	Bruce R. Payne, Ph. D.	
Do	Vanderbilt University	Coed	James H. Kirkland, LL. D., chancellor.	
Ruskin	Ruskin-Cave College	Coed		
Sewanee	University of the South	Men	Albion W. Knight, D. D., vice chancellor.	
Spencer	Burritt College	Coed	W. S. Graves, A. M.	
Washington College.	Washington College	Coed	James T. Cooter, D. D.	**Wm. J. Wilkinson, B. L.**
TEXAS.				
Abilene	Simmons College	Coed	Jefferson D. Sandefer, Ph. B.	**Oscar H. Cooper, LL. D.**
Austin	University of Texas	Coed	Robert E. Vinson, LL. D.	**Wm. S. Sutton, LL. D.**
Belton	Baylor Female College	Women	John C. Hardy, LL. D.	**Payton Jacobs, A. M.**
Brownwood	Daniel Baker College	Coed	Tinsley P. Junkin, LL. D.	
Do	Howard Payne College	Coed	Judson A. Tolman, Ph. D.	
College Station	Agricultural and Mechanical College of Texas.	Men	Wm. B. Bizzell, D. C. L.	**Martin L. Hayes, A. M.**
Dallas	Southern Methodist University.	Coed	Robert S. Hyer, LL. D.	**Paul W. Terry, A. M.**
Denton	College of Industrial Arts	Women	F. M. Bralley, A. B.	**R. J. Turrentine, A. M.**
Fort Worth	Texas Woman's College.	Women	J. D. Young, LL. B.	**Elzy D. Jennings, A. M.**
Do	Texas Christian University.	Coed	W. B. Parks, Ph. D., acting.	**W. H. Batson, Ph. D.**
Georgetown	Southwestern University	Coed	Charles M. Bishop, D. D.	**Claude A. Nichols, Ph. D.**
Houston	Rice Institute	Coed	Edgar O. Lovett, LL. D.	**R. A. Tsanoff, Ph. D.**
San Antonio	St. Louis College	Men	A. Frische, S. M.	
Sherman	Austin College	Men	Thomas S. Clyce, LL. D.	**J. J. Delaney, A. M.**
Tehuacana	Westminster College	Coed	John C. Williams, D. D	
Waco	Baylor University	Coed	Samuel P. Brooks, LL. D.	**A. J. Hall, Ph. D.**
Waxahachie	Trinity University	Coed	Samuel Lee Hornbeak, LL. D.	**W. M. Liggett, A. M.**
UTAH.				
Logan	Agricultural College of Utah.	Coed	E. G. Peterson, Ph. D.	
Salt Lake City	University of Utah	Coed	John A. Widtsoe, LL. D.	**Milton Bennion, A. M.**
VERMONT.				
Burlington	University of Vermont and State Agricultural College.	Coed	Guy P. Benton, LL.D.	**James F. Messenger. Ph. D.**
Middlebury	Middlebury College	Coed	John Martin Thomas, LL. D.	**Raymond McFarland, A. M.**
Northfield	Norwich University	Men	Herbert R. Roberts, D. C. L., acting.	
Winooski	St. Michael's College	Men	E. M. Salmon, D. D.	
VIRGINIA.				
Abingdon	Martha Washington College.	Women	Samuel D. Long, A. B.	
Ashland	Randolph-Macon College.	Men	Robert E. Blackwell, LL. D.	
Blacksburg	Virginia Agricultural and Mechanical College and Polytechnic Institute.	Men	Joseph D. Eggleston, A. M.	
Bridgewater	Bridgewater College	Coed	John S. Flory, Ph. D.	**P. H. Bowman, D. D.**
Charlottesville	University of Virginia	Men	Edwin A. Alderman, LL. D.	**W. H. Heck, Ph. D.**

XVII.—Universities and Colleges—Presidents and Heads of Departments of Education—Continued.

Location.	University or college.	For men, for women, or coeducational.	Name of president.	Name of head of department or school of education.
VIRGINIA—con.				
Emory...........	Emory and Henry College.	Men.....	Chas. C. Weaver, Ph. D.	
Hampden-Sidney.	Hampden-Sidney College.	Men.....	A. W. McWhorter, Ph. D., acting.	
Hollins...........	Hollins College..........	Women.	Matty L. Cocke.......	
Lexington........	Virginia Military Institute.	Men.....	Edward W. Nichols, supt.	
Do...........	Washington and Lee University.	Men.....	Henry Louis Smith, LL. D.	
Lynchburg.......	Randolph-Macon Woman's College.	Women.	Wm. A. Webb, LL. D.	E. B. Crooks, Ph. D.
Do...........	Virginia Christian College.	Coed....	J. T. T. Hundley, A. B.	
Manassas.........	Eastern College.........	Coed....	Hervin U. Roop, LL. D.	
Richmond.......	Richmond College.......	Coed....	F. W. Boatwright, LL. D.	D. B. Bryan, Ped. D.
Do...........	Virginia Union University (colored).	Men.....	George R. Hovey, D. D.	M. P. Robinson, A. B.
Salem............	Roanoke College........	Men.....	John A. Morehead, D. D.	F. V. N. Painter, Litt.D.
Do...........	Elizabeth College........	Women.	John C. Peery, A. M...	Irene B. Palmer.
Sweet Briar......	Sweet Briar College.....	Women.	Emilie W. McVea, Litt. D.	
Williamsburg....	College of William and Mary.	Men.....	Lyon G. Tyler, LL. D.	C. H. Hatz, Ph. D.
WASHINGTON.				
Pullman.........	State College of Washington.	Coed....	Ernest O. Holland, Ph. D.	Alfred A. Cleveland, Ph. D.
Seattle...........	University of Washington.	Coed....	Henry Suzzallo, Ph. D.	Frederick E. Bolton, Ph. D.
Spokane.........	Gonzaga University.....	Men.....	James M. Brogan, S. J.	
Tacoma..........	College of Puget Sound..	Coed....	Edward H. Todd, D.D	O. E. Reynolds, A. M.
Walla Walla.....	Whitman College........	Coed....	Stephen B. L. Penrose, D. D.	
WEST VIRGINIA.				
Bethany.........	Bethany College.........	Coed....	Thomas E. Cramblet, LL. D.	W. H. Cramblet, Ph. D.
Buckhannon.....	West Virginia Wesleyan College.	Coed....	Wallace B. Fleming, D. D.	B. F. Haught, A. M.
Elkins...........	Davis and Elkins College.	Coed....	James E. Allen, A. B..	Florence A. Kellogg, A. M.
Morgantown.....	West Virginia University.	Coed....	Frank B. Trotter, LL. D.	Jasper N. Deahl, Ph. D.
WISCONSIN.				
Appleton.........	Lawrence College........	Coed....	Samuel Plantz, LL. D.	Lester B. Rogers, Ph. D.
Beloit............	Beloit College..........	Coed....	Melvin A. Brannon, LL. D.	Almon W. Burr, A. M.
Madison..........	University of Wisconsin.	Coed....	Edward A. Birge, LL. D.	V. A. C. Henmon, Ph. D.
Milton...........	Milton College..........	Coed....	Wm. C. Daland, D.D..	
Milwaukee.......	Marquette University...	Men.....	Herbert C. Noonan, S. J.	
Do...........	Milwaukee-Downer College.	Women.	Ellen C. Sabin, LL. D.	Mina Kerr, Ph. D.
Plymouth........	Mission House..........	Coed....	E. A. Hofer, D. D.....	
Prairie du Chien..	Campion College........	Men.....	Albert C. Fox, S. J....	
Ripon............	Ripon College...........	Coed....	H. C. Culbertson, LL. D.	Wm. J. Mutch, Ph. D.
Sinsinawa........	St. Clara College and Academy.	Women.	Mother Mary Samuel..	Sister M. Ruth, Ph. D.
Watertown.......	Northwestern College...	Men.....	August F. Ernst, Ph. D.	
Waukesha.......	Carroll College..........	Coed....	Herbert P. Houghton, Ph. D.	S. B. Ray, L. H. D.
WYOMING.				
Laramie.........	University of Wyoming.	Coed....	Aven Nelson, Ph. D...	J. E. Bullern.

XVIII.—UNIVERSITIES AND COLLEGES—DEANS OR DIRECTORS OF COLLEGES OR SCHOOLS OF ENGINEERING.

Location.	Name of institution.	Dean or director.
Auburn, Ala	Alabama Polytechnic Institute	John J. Wilmore, M. E.
University, Ala	University of Alabama	George J. Davis, jr., C. E.
Tucson, Ariz	University of Arizona	Gurdon M. Butler, E. M.
Fayetteville, Ark	University of Arkansas	Wm. N. Gladson, Ph. D.
Berkeley, Cal	University of California	Charles Derleth, jr., C. E.[1] Andrew C. Lawson, Ph. D.[2] Clarence L. Cory, D. Eng.[3]
Los Angeles, Cal	University of Southern California	Charles W. Lawrence, C. E.
Pasadena, Cal	Throop College of Technology	George A. Damon, E. E.
Santa Clara, Cal	University of Santa Clara	Joseph L. Donovan, C. E.[4] George L. Sullivan, Ph. D.[5]
Stanford University, Cal	Leland Stanford Junior University	Charles D. Marx, C. E.[4] Harris J. Ryan, M. E.[6] William F. Durand, Ph. D.[7]
Boulder, Colo	University of Colorado	Milo S. Ketchum, C. E.
Colorado Springs, Colo	Colorado College	
Fort Collins, Colo	Colorado Agricultural College	L. D. Crane, M. M. E.
Golden, Colo	State School of Mines	Victor C. Alderson, Sc. D.
New Haven, Conn	Sheffield Scientific School (Yale University).	Russell H. Chittenden, Sc. D.
Newark, Del	Delaware College	Allen R. Cullimore, B. S.
Washington, D. C	Catholic University of America	Aubrey E. Landry, Ph. D.
Do	George Washington University	Howard L. Hodgkins, Ph. D.
Do	Howard University (colored)	Harold D. Hatfield, M. E.
Gainesville, Fla	University of Florida	John R. Benton, Ph. D.
Athens, Ga	University of Georgia	Charles M. Strahan, Sc. D.
Atlanta, Ga	Georgia School of Technology	William H. Emerson, Ph. D.
Moscow, Idaho	University of Idaho	Charles N. Little, Ph. D.
Chicago, Ill	Armour Institute of Technology	Howard M. Raymond, B. S.
Do	Lewis Institute	P. B. Woodworth, M. E.
Evanston, Ill	Northwestern University	John F. Hayford, C. E.
Urbana, Ill	University of Illinois	C. Russ Richards, M. E.
La Fayette, Ind	Purdue University	Charles H. Benjamin, D. Eng.
Notre Dame, Ind	University of Notre Dame	Martin McCue, C. E.
Terre Haute, Ind	Rose Polytechnic Institute	Carl L. Mees, Ph. D.
Valparaiso, Ind	Valparaiso University	Frank Theroux, C. E.
Ames, Iowa	Iowa State College of Agriculture and Mechanic Arts.	S. W. Beyer, Ph. D.
Iowa City, Iowa	State University of Iowa	William G. Raymond, LL. D.
Lawrence, Kans	University of Kansas	Perley F. Walker, M. M. E.
Manhattan, Kans	Kansas State Agricultural College	Audrey A. Potter, B. S.
Lexington, Ky	University of Kentucky	Frederick P. Anderson, M. E.
Baton Rouge, La	Louisiana State University and Agricultural and Mechanical College.	Thomas W. Atkinson, C. E.
New Orleans, La	Tulane University of Louisiana	William H. Creighton, U. S. N.
Orono, Me	University of Maine	Harold S. Boardman, C. E.
Baltimore, Md	Johns Hopkins University	John B. Whitehead, Ph. D.
College Park, Md	Maryland State College of Agriculture.	T. H. Taliaferro, Ph. D.
Cambridge, Mass	Massachusetts Institute of Technology.	Alfred E. Burton, Sc. D.
Lowell, Mass	Lowell Textile School	Herbert J. Ball, B. S.
Tufts College, Mass	Tufts College	Gardner C. Anthony, Sc. D.
Worcester, Mass	Worcester Polytechnic Institute	Ira N. Hollis, Sc. D.
Ann Arbor, Mich	University of Michigan	Mortimer E. Cooley, D. Eng.
Detroit, Mich	University of Detroit	Jay R. McColl, B. S.
East Lansing, Mich	Michigan Agricultural College	George W. Bissell, M. E.
Houghton, Mich	Michigan College of Mines	Fred W. McNair, Sc. D.
Minneapolis, Minn	University of Minnesota	John R. Allen, M. E. William R. Appleby, A. M.[8]
Agricultural College, Miss	Mississippi Agricultural and Mechanical College.	B. M. Walker, Ph. D.
University, Miss	University of Mississippi	John H. Dorroh, C. E.
Columbia, Mo	University of Missouri	Elmer J. McCaustland, M. C. E. Austin L. McRae, Sc. D.[8]
St. Louis, Mo	Washington University	Alexander S. Langsdorf, M. M. E.
Bozeman, Mont	Montana College of Agriculture and Mechanic Arts.	Arthur W. Richter, M. M. E.
Butte, Mont	Montana State School of Mines	Charles H. Bowman, M. S.
Lincoln, Nebr	University of Nebraska	Olin J. Ferguson, M. E. E., acting.
Reno, Nev	University of Nevada	James G. Scrugham, M. E. Francis C. Lincoln, Ph. D.[9]
Durham, N. H	New Hampshire College of Agriculture and Mechanic Arts.	Charles E. Hewett, M. M. E.
Hanover, N. H	Dartmouth College	Charles A. Holden, C. E., acting.
Hoboken, N. J	Stevens Institute of Technology	Alexander C. Humphreys, LL.D.
New Brunswick, N. J	Rutgers College	Alfred A. Titsworth, Sc. D.
Princeton, N. J	Princeton University	Frank H. Constant, Sc. D.

[1] Dean of the college of civil engineering.

[2] Dean of the college of mines.

[3] Dean of the college of mechanics.

[4] Professor of civil engineering.

[5] *Professor of mechanical-electrical* engineering.

[6] Professor of electrical engineering.

[7] Professor of mechanical engineering.

[8] Dean of the school of mines.

[9] Director of Mackay School of Mines.

XVIII.—Universities and Colleges—Deans or Directors of Colleges or Schools of Engineering—Continued.

Location.	Name of institution.	Dean or director.
Albuquerque, N. Mex	University of Mexico	W. L. Ray, A. M.
Socorro, N. Mex	New Mexico School of Mines	Alexis X. Illineki, Met. E.
State College, N. Mex	New Mexico College of Agriculture and Mechanic Arts.	Arthur F. Barnes, B. S.
Brooklyn, N. Y	Polytechnic Institute of Brooklyn	Fred W. Atkinson, Ph. D.
Ithaca, N. Y	Cornell University	Eugene E. Haskell, C. E.[1] Dexter S. Kimball, M. E.[2]
New York, N. Y	College of the City of New York	David B. Steinman, Ph. D.
Do	Columbia University	George B. Pegram, Ph. D.
Do	Manhattan College	Brother Thomas, C. E.
Do	New York University	Charles H. Snow, Sc. D.
Potsdam, N. Y	Clarkson College of Technology	John P. Brooks, Sc. D.
Rochester, N. Y	University of Rochester	Millard C. Ernsberger, M. E.
Schenectady, N. Y	Union University	A. B. McDaniel, B. S.[3] Ernst J. Berg, Sc. D.[4]
Syracuse, N. Y	Syracuse University	William P. Graham, Ph. D.
Troy, N. Y	Rensselaer Polytechnic Institute	Palmer C. Ricketts, LL. D.
Chapel Hill, N. C	University of North Carolina	Andrew H. Patterson, A. M.
West Raleigh, N. C	North Carolina State College of Agriculture and Engineering.	Howard E. Satterfield, M. E.[5] Carroll L. Mann, C. E.[3] William H. Browne, A. B.[4]
Agricultural College, N. Dak	North Dakota Agricultural College	Edward S. Keene, M. E.
University, N. Dak	University of North Dakota	Earle J. Babcock, Sc. D.
Ada, Ohio	Ohio Northern University	Charles A. Miller, C. E.
Akron, Ohio	Municipal University of Akron	Fred E. Ayer, C. E.
Cincinnati, Ohio	University of Cincinnati	Herman Schneider, Sc. D.
Cleveland, Ohio	Case School of Applied Science	Charles S. Howe, Sc. D.
Columbus, Ohio	Ohio State University	Edwin F. Coddington, Ph. D.
Dayton, Ohio	St. Mary College	Brother Adam Hofmann, S. M.
Norman, Okla	University of Oklahoma	James H. Felgar, M. E.
Stillwater, Okla	Oklahoma Agricultural and Mechanical College.	Alfred Boyd, C. E.
Corvallis, Oreg	Oregon State Agricultural College	Grant A. Covell, M. E.
Chester, Pa	Pennsylvania Military College	Harold C. Bird, C. E.
Easton, Pa	Lafayette College	Edward Hart, Ph. D.
Gettysburg, Pa	Pennsylvania College	F. H. Clutz, Ph. D.
Lewisburg, Pa	Bucknell University	Charles A. Lindemann, A. M.
Philadelphia, Pa	Drexel Institute	Arthur J. Rowland, Sc. D.
Do	University of Pennsylvania	John Frazer, Ph. D.
Pittsburgh, Pa	Carnegie Institute of Technology	W. E. Mott, C. E.
Do	University of Pittsburgh	Frederic L. Bishop, Ph. D.
South Bethlehem, Pa	Lehigh University	N. M. Emery, Litt. D., acting.
State College, Pa	Pennsylvania State College	Robert L. Sackett, C. E. Elwood S. Moore, Ph. D.[6]
Swarthmore, Pa	Swarthmore College	George F. Blessing, Ph. D.
Villanova, Pa	Villanova College	Francis A. Driscoll, A. M.
Kingston, R. I	Rhode Island State College	Royal L. Wales, B. S.
Providence, R. I	Brown University	William H. Kenerson, A. M.
Charleston, S. C.	The Citadel, the Military College of South Carolina.	Robert O. Thomas, C. E.
Clemson College, S. C	Clemson Agricultural College	Samuel B. Earle, M. E.
Columbia, S. C.	University of South Carolina	Marshall G. Holmes, C. E.
Brookings, S. Dak	South Dakota State College of Agriculture and Mechanic Arts.	Halvor C. Solberg, M. E.
Rapid City, S. Dak	South Dakota State School of Mines	Cleophas C. O'Harra, Ph. D.
Vermilion, S. Dak	University of South Dakota	Lewis E. Akeley, LL. D.
Knoxville, Tenn	University of Tennessee	Charles E. Ferris, B. S
Nashville, Tenn	Vanderbilt University	W. H. Schuerman, C. E.
Austin, Tex	University of Texas	Thomas U. Taylor, M. C. E.
College Station, Tex	Agricultural and Mechanical College of Texas.	James C. Nagle, M. C. E.
Houston, Tex	Rice Institute	Herbert K. Humphrey, E. E.
Salt Lake City, Utah	University of Utah	Ray B. West, C. E.
Burlington, Vt	University of Vermont and State Agricultural College.	Josiah W. Votey, Sc. D.
Northfield, Vt	Norwich University	Arthur W. Winslow, C. E.
Blacksburg, Va	Virginia Agricultural and Mechanical College and Polytechnic Institute.	Samuel R. Pritchard, A. M.
Charlottesville, Va	University of Virginia	William M. Thornton, LL. D.
Lexington, Va	Virginia Military Institute	T. A. Jones, B. S.
Do	Washington and Lee University	David C. Humphreys, C. E.
Pullman, Wash	State College of Washington	H. V. Carpenter, M. S.
Seattle, Wash	University of Washington	Carl E. Magnusson, Ph. D.
Morgantown, W. Va	West Virginia University	Clement R. Jones, M. M. E.
Madison, Wis	University of Wisconsin	Frederick E. Turneaure, D. Eng.
Milwaukee, Wis	Marquette University	J. C. Pinney, C. E.
Laramie, Wyo	University of Wyoming	Elmer O. Hoefer, M. E.

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[1] Dean of the college of civil engineering.

[2] Acting dean of Sibley College.

[3] Professor of civil engineering.

[4] Professor of electrical engineering.

[5] Professor of mechanical engineering.

[6] Dean of the school of mines.

XIX.—UNIVERSITIES AND COLLEGES—DEANS OF WOMEN.

Location.	University or college.	For women, or coeducational.	Name of dean.
ALABAMA.			
Athens	Athens College for Young Women.	Women	
Auburn	Alabama Polytechnic Institute	Coed	
Birmingham	Birmingham—Southern College	Coed	
Do	Howard College	Coed	Nannie M. Hiden.
Marion	Judson College	Women	
Montevallo	Alabama Girls Technical School	Women	Mary G. Stallworth.
Montgomery	Woman's College of Alabama	Women	Lena J. Hawks.
University	University of Alabama	Coed	Mrs. James S. Thomas.
ARIZONA.			
Tucson	University of Arizona	Coed	Anna A. Fisher.
ARKANSAS.			
Arkadelphia	Henderson-Brown College	Coed	
Do	Ouachita College	Coed	Annie R. Storts.
Batesville	Arkansas College	Coed	
Clarksville	Arkansas Cumberland College	Coed	
Conway	Central College	Women	Caroline B. Phelps.
Do	Hendrix College	Coed	
Fayetteville	University of Arkansas	Coed	Mary Davis.
CALIFORNIA.			
Berkeley	University of California	Coed	Lucy M. Stebbins.
Claremont	Pomona College	Coed	Grace E. Berry.
Los Angeles	Occidental College	Coed	Irene T. Myers.
Do	University of Southern California	Coed	Mrs. Maryette MacKey.
Mills College	Mills College	Women	Hettie B. Ege.
Redlands	University of Redlands	Coed	Mrs. L. M. Redden.
St. Helena	Pacific Union College	Coed	
San Jose	College of the Pacific	Coed	Mariam Barr.
Stanford University	Leland Stanford Junior University	Coed	Harriet Bradford.
Whittier	Whittier College	Coed	Ida B. Lindley, adviser.
COLORADO.			
Boulder	University of Colorado	Coed	Irene P. McKeehan, acting.
Colorado Springs	Colorado College	Coed	Marion Churchill.
Fort Collins	Colorado Agricultural College	Coed	Virginia H. Corbett.
Greeley	Colorado State Teachers College	Coed	Helen Gilpin-Brown.
Montclair	Colorado Woman s College	Women	
University Park	University of Denver	Coed	Anne McK. Shuler.
CONNECTICUT.			
New London	Connecticut College for Women	Women	Irene Nye.
Storrs	Connecticut Agricultural College	Coed	M. E. Sprague.
DELAWARE.			
Newark	Delaware College	Coed	Winifred J. Robinson.[1]
DISTRICT OF COLUMBIA.			
Washington	American University	Coed	
Do	Gallaudet College	Coed	Charlotte Weiss.
Do	George Washington University	Coed	
Do	Howard University (colored)	Coed	Mary I. Hardwick, proc tress.
Do	Trinity College	Women	Sister Mary.
Do. (Takoma Park).	Washington Missionary College	Coed	
FLORIDA.			
De Land	John B. Stetson University	Coed	
Lake City	Columbia College	Coed	
Sutherland	Southern College	Coed	
Tallahassee	Florida State College for Women	Women	Mrs. S. L. Cawthon.
Winter Park	Rollins College	Coed	Lily W. Roberts, Preceptres
GEORGIA.			
Atlanta	Atlanta University (colored)	Coed	
Do	Morris Brown University (colored)	Coed	Junia M. Jordan.[2]
College Park	Cox College	Women	Alva B. Jameson.

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[1] Dean of Woman's College of Delaware. [2] Adviser of women. [3] Preceptress, School of Economics.

XIX.—UNIVERSITIES AND COLLEGES—DEANS OF WOMEN—Continued.

Location.	University or college.	For women, or coeducational.	Name of dean.
RGIA—continued.			
onega	North Georgia Agricultural College.	Coed	
tur	Agnes Scott College	Women	Nannette Hopkins.
orest	Piedmont College	Coed	Bertha A. Hastings.[1]
yth	Bessie Tift College	Women	
esville	Brenau College	Women	Eva F. Pearce.
ange	Lagrange Female College	Women	Jule H. Tucker.
Do	Southern Female College	Women	Miss Black.
n	Wesleyan Female College	Women	
e	Shorter College	Women	Virginia Wendell.
h Atlanta	Clark University (colored)	Coed	
HAWAII.			
olulu	College of Hawaii	Coed	
IDAHO.			
well	College of Idaho	Coed	
ow	University of Idaho	Coed	Permeal J. French.
ILLINOIS.			
gdon	Hedding College	Coed	Grace D. Taylor.
ra	Aurora College	Coed	
mington	Illinois Wesleyan University	Coed	
age	Carthage College	Coed	Letta Simmons.
go	De Paul University	Coed	
Do	Lewis Institute	Coed	Helen D. Street.
Do	University of Chicago	Coed	Marion Talbot.
tur	James Millikin University	Coed	Lillian M. Walker.
ka	Eureka College	Coed	Lydia Wampler.
ston	Northwestern University	Coed	Mary R. Potter.
g	Ewing College	Coed	
sburg	Knox College	Coed	Grace A. Stayt.
Do	Lombard College	Coed	Nelle Miller.
nville	Greenville College	Coed	Mrs. Amanda M. Garlock, Preceptress.
sonville	Illinois College	Coed	
Do	Illinois Woman's College	Women	Margaret Taylor.
Forest	Lake Forest College	Coed	Mary Hamilton.
non	McKendree College	Coed	Beatrice H. Cooper.
oln	Lincoln College	Coed	
mouth	Monmouth College	Coed	Sarah F. Brownlee.
erville	Northwestern College	Coed	Clara Bleck.
ford	Rockford College	Women	Julia H. Gulliver, president.
Island	Augustana College	Coed	
er Alton	Shurtleff College	Coed	G. Esther Chapin.
na	University of Illinois	Coed	Ruby E. C. Mason.
aton	Wheaton College	Coed	Mrs. Martha T. Garlough.
INDIANA.			
mington	Indiana University	Coed	Ruby E. C. Mason.
ham	Earlham College	Coed	Martha Doan.
klin	Franklin College	Coed	Mrs. Bertha D. Smith.
en	Goshen College	Coed	
ncastle	De Pauw University	Coed	Katherine S. Alvord.
over	Hanover College	Coed	
napolis	Butler College	Coed	Katherine M. Graydon.
Do	Indiana Central University	Coed	
ayette	Purdue University	Coed	Coroline E. Shoemaker.
m	Union Christian College	Coed	
e Dame	St. Mary's College and Academy	Women	
and City	Oakland City College	Coed	Mrs. Ella C. Wheatley.
nd	Taylor University	Coed	Sadie L. Miller.
araiso	Valparaiso University	Coed	Mrs. Sarah P. Kinsey.
ennes	Vincennes University	Coed	
IOWA.			
s	Iowa State College of Agriculture and Mechanic Arts.	Coed	
r Falls	Iowa State Teachers College	Coed	Mrs. Marion McF. Walker.
r Rapids	Coe College	Coed	Maria Leonard.

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[1] Director of college women.

XIX.—UNIVERSITIES AND COLLEGES—DEANS OF WOMEN—Continued.

Location.	University or college.	For women, or coeducational.	Name of dean.
IOWA—continued.			
Des Moines	Des Moines College	Coed	Charlene F. Sperry.
Do	Drake University	Coed	Mrs. Mary C. Craig.
Dubuque	Dubuque College and Seminary	Coed	
Fairfield	Parsons College	Coed	Christine Hume.
Fayette	Upper Iowa University	Coed	
Grinnell	Grinnell College	Coed	Carrie L. De Nise.
Hopkinton	Lenox College	Coed	
Indianola	Simpson College	Coed	Junia L. Todd.
Iowa City	State University of Iowa	Coed	Mrs. Nellie D. Aurner.
Iowa Falls	Ellsworth College	Coed	
Mount Pleasant	Iowa Wesleyan College	Coed	Harriet L. Barber.
Mount Vernon	Cornell College	Coed	Mary L. MacCleod.
Oskaloosa	Penn College	Coed	Edith Furnas.
Pella	Central College of Iowa	Coed	Elizabeth A. Graham.
Sioux City	Morningside College	Coed	Lillian E. Dimmitt.
Storm Lake	Buena Vista College	Coed	
Tabor	Tabor College	Coed	
University Park	Central Holiness University	Coed	
KANSAS.			
Atchison	Midland College	Coed	Lydia L. Diehl.
Baldwin City	Baker University	Coed	Anne G. Wirt.
Emporia	College of Emporia	Coed	Susan M. Guild.
Highland	Highland College	Coed	
Kansas City	Kansas City University	Coed	
Lawrence	University of Kansas	Coed	Mrs. Eustace H. Brown, adviser.
Lindsborg	Bethany College	Coed	
McPherson	McPherson College	Coed	
Manhattan	Kansas State Agricultural College	Coed	Mrs. Mary P. Van Zile.
Ottawa	Ottawa University	Coed	Johanna M. Pirscher.
Salina	Kansas Wesleyan University	Coed	Caroline Matson.
Sterling	Cooper College	Coed	Althea Montgomery.
Topeka	Washburn College	Coed	Florence E. Williard.
Wichita	Fairmount College	Coed	Flora C. Clough.
Do	Friends University	Coed	No dean.
Winfield	Southwestern College	Coed	Ella E. Bernstorf.
KENTUCKY.			
Berea	Berea College	Coed	Katherine S. Bowersox.
Georgetown	Georgetown College	Coed	Mrs. M. D. McFerran.
Hopkinsville	Bethel Woman's College	Women	
Lexington	University of Kentucky	Coed	Anna J. Hamilton.
Do	Transylvania College	Coed	
Louisville	University of Louisville	Coed	Mary E. Jones, adviser.
Winchester	Kentucky Wesleyan College	Coed	
LOUISIANA.			
Baton Rouge	Louisiana State University and Agricultural and Mechanical College.	Coed	Antoinette S. Tucker.
Clinton	Silliman Collegiate Institute	Women	
New Orleans	H. Sophie Newcomb Memorial College.	Women	
Pineville	Louisiana College	Coed	Mrs. Jones.
MAINE.			
Lewiston	Bates College	Coed	Clara L. Buswell.
Orono	University of Maine	Coed	
Waterville	Colby College	Coed	Mrs. Mary C. Cooper.
MARYLAND.			
Baltimore	Goucher College	Women	Eleanor L. Lord.
Do	Johns Hopkins University	Coed	
Do	Morgan College (colored)	Coed	Minnie McA. Pickens.
Do	Notre Dame College of Maryland	Women	Sister Mary Immaculata.
Chestertown	Washington College	Coed	
Frederick	Hood College	Women	Mrs. Ida C. Fleming.
Lutherville	Maryland College for Women	Women	
New Windsor	Blue Ridge College	Coed	Emma S. Baker, preceptress.
Westminster	Western Maryland College	Coed	Margaret M. Robinson.

XIX.—Universities and Colleges—Deans of Women—Continued.

Location.	University or college.	For women, or coeducational.	Name of dean.
MASSACHUSETTS.			
Amherst	Massachusetts Agricultural College	Coed	
Boston	Boston University	Coed	Mrs. Agnes K. Black, adviser.
Do	Simmons College	Women	Sarah L. Arnold.[1]
Cambridge	Massachusetts Institute of Technology.	Coed	No dean of women.
Do	Radcliffe College	Women	Bertha M. Boody.
Lowell	Lowell Textile School	Coed	
Northampton	Smith College	Women	Ada L. Comstock.
Norton	Wheaton College	Women	Ida J. Everett.
South Hadley	Mount Holyoke College	Women	Florence Purington.
Tufts College	Tufts College	Coed	Mrs. Caroline S. Davies.[2]
Wellesley	Wellesley College	Women	Alice V. Waite.
MICHIGAN.			
Adrian	Adrian College	Coed	Mrs. Cora Davis.
Albion	Albion College	Coed	Mrs. Helen Knappen-Scripps.
Alma	Alma College	Coed	Camelia I. Buswell.
Ann Arbor	University of Michigan	Coed	Mrs. Myra B. Jordan.
East Lansing	Michigan Agricultural College	Coed	Annie Howard, adviser.
Hillsdale	Hillsdale College	Coed	Cora A. Pickett.
Holland	Hope College	Coed	Mrs. Winnifred H. Durfee.
Kalamazoo	Kalamazoo College	Coed	Lucile Powell.
Olivet	Olivet College	Coed	Mrs. E. R. Latham.
MINNESOTA.			
Minneapolis	University of Minnesota	Coed	Gertrude Beggs.[3]
Northfield	Carleton College	Coed	Mary L. Benton.[4]
Do	St. Olaf College	Coed	Gertrude M. Hilleboe.
St. Paul	College of St. Catherine	Women	Sister Antonia.
Do	Hamline University	Coed	
Do	Macalester College	Coed	C. W. Williams.
St. Peter	Gustavus Adolphus College	Coed	Clara Tederstrom, preceptress
Winona	College of St. Teresa	Women	Mary A. Malloy.
MISSISSIPPI.			
Agricultural College	Mississippi Agricultural and Mechanical College.	Coed	
Blue Mountain	Blue Mountain College	Women	Mrs. M. L. Berry, lady principal.
Brookhaven	Whitworth Female College	Women	
Columbus	Mississippi Industrial Institute and College.	Women	
Grenada	Grenada College	Women	
Holly Springs	Rust College (colored)	Coed	Mary L. Brayman.
Jackson	Belhaven College	Women	Sallie McLean.
Do	Millsaps College	Coed	
Meridian	Meridian College	Coed	Mrs. L. B. Haynes.
University	University of Mississippi	Coed	Mrs. E. B. Eatman.
MISSOURI.			
Cameron	Missouri Wesleyan College	Coed	Mrs. Sarah C. De Bra.
Canton	Culver-Stockton College	Coed	Mrs. E. R. Redd.
Columbia	University of Missouri	Coed	Eva Johnston, adviser.
Fayette	Central College	Coed	
Lexington	Central Female College	Women	
Marshall	Missouri Valley College	Coed	
Parkville	Park College	Coed	Francis B. Jones.
St. Louis	Washington University	Coed	Martha G. McCaulley.
Springfield	Drury College	Coed	Luella C. Carson.
Tarkio	Tarkio College	Coed	
Warrenton	Central Wesleyan College	Coed	
MONTANA.			
Bozeman	Montana College of Agriculture and Mechanic Arts.	Coed	Una B. Herrick.
Butte	Montana State School of Mines	Coed	
Missoula	University of Montana	Coed	Mrs. K. W. Jameson.

[1] On leave; Marion E. Park, acting dean.

[2] Dean of Jackson College for Women.

[3] Katharine Ball, vocational adviser for women.

[4] On leave; Edith Denise, acting dean.

XIX.—UNIVERSITIES AND COLLEGES—DEANS OF WOMEN—Continued.

Location.	University or college.	For women, or coeducational.	Name of dean.
NEBRASKA.			
Bellevue	Bellevue College	Coed	Minnie L. Carter.
Bethany	Cotner University	Coed	Grace E. Young, acting.
College View	Union College	Coed	Lillian Danielson.
Crete	Doane College	Coed	Helen Meston.
Grand Island	Grand Island College	Coed	Elizabeth A. Hall.
Hastings	Hastings College	Coed	Mayme I. Logsdon.
Lincoln	University of Nebraska	Coed	Amanda H. Heppner, acting.
Omaha	University of Omaha	Coed	
University Place	Nebraska Wesleyan University	Coed	
York	York College	Coed	Mrs. Sadie Rector.
NEVADA.			
Reno	State University of Nevada	Coed	Margaret E. Mack, acting.
NEW HAMPSHIRE.			
Durham	New Hampshire College of Agriculture and Mechanic Arts.	Coed	Helen Knowlton.
NEW JERSEY.			
Convent Station	College of St. Elizabeth	Women	Sister Mary P. Kelligar.[1]
Kenilworth	Upsala College	Coed	
NEW MEXICO.			
Albuquerque	University of New Mexico	Coed	
Socorro	New Mexico School of Mines	Coed	
State College	New Mexico College of Agriculture and Mechanic Arts.	Coed	Mary F. Winningham, adviser.
NEW YORK.			
Albany	New York State College for Teachers.	Coed	Anna E. Pierce.
Alfred	Alfred University	Coed	Mabel I. Hart, adviser.
Aurora	Wells College	Women	Mrs. Anna A. Piutti.
Brooklyn	Adelphi College	Coed	Anna E. Harvey.
Buffalo	University of Buffalo	Coed	
Canton	St. Lawrence University	Coed	Sarah DeM. Plaisance.
Elmira	Elmira College	Women	M. Anstice Harris.
Geneva	Hobart College	Coed	Anne D. Blitz.[2]
Ithaca	Cornell University	Coed	Georgia L. White, adviser.
New Rochelle	College of New Rochelle	Women	
New York	Barnard College	Women	Virginia C. Gildersleeve.
Do	Hunter College of the City of New York.	Women	Annie E. Hickinbottom.
Do	New York University	Coed	Aristine P. Munn-Recht, adviser.
Do	Teachers College	Coed	Lucetta Daniell, social director.
Poughkeepsie	Vassar College	Women	Ella McCaleb.[3]
Rochester	University of Rochester	Coed	Annette G. Munro.[4]
Syracuse	Syracuse University	Coed	Jean M. Richards.
Troy	Russell Sage College of Practical Arts.	Women	Katherine M. Kellas.
NORTH CAROLINA.			
Chapel Hill	University of North Carolina	Coed	Mrs. Thomas W. Lingle, adviser.
Charlotte	Queens College	Women	
Durham	Trinity College	Coed	Martha Buchanan.
Elon College	Elon College	Coed	Jean Demuth.
Greensboro	Greensboro College for Women	Women	Mrs. Frank Siler.
Guilford College	Guilford College	Coed	H. Louisa Osborne.
Hickory	Lenoir College	Coed	
Raleigh	Meredith College	Women	Rosa C. Paschal.
Do	Peace Institute	Women	
Do	St. Mary's School	Women	Lucy G. Hester, lady principal.
Do	Shaw University (colored)	Coed	Charlotte Murray.
Red Springs	Flora Macdonald College	Women	Mary Johnston.
Salisbury	Livingston College (colored)	Coed	
Wilson	Atlantic Christian College	Coed	
Winston-Salem	Salem Academy and College	Women	Ellen Yerrington.

[1] President.
[2] Dean of William Smith College for Women.
[3] Jean C. Palmer, head warden.
[4] Dean of the College for Women.

XIX.—Universities and Colleges—Deans of Women—Continued.

Location.	University or college.	For women, or coeducational.	Name of dean.
NORTH DAKOTA.			
Agricultural College	North Dakota Agricultural College	Coed	Katherine Jensen.[1]
Fargo	Fargo College	Coed	Clara J. Emerson.
Jamestown	Jamestown College	Coed	Eva A. Parslow.
University	University of North Dakota	Coed	Ella L. Fulton.
OHIO.			
Ada	Ohio Northern University	Coed	
Akron	Municipal University of Akron	Coed	Mrs. Elizabeth A. Thompson.
Alliance	Mount Union College	Coed	Florence Nicholson.
Ashland	Ashland College	Coed	Mary M. Billman.
Athens	Ohio University	Coed	Irma E. Voigt.
Berea	Baldwin-Wallace College	Coed	Mrs. Mame A. Condit.
Bluffton	Bluffton College	Coed	Edith McPeake.
Cedarville	Cedarville College	Coed	Mary Ervin.
Cincinnati	University of Cincinnati	Coed	Loueen Pattee.
Cleveland	Western Reserve University	Coed	Helen M. Smith.[2]
Columbus	Ohio State University	Coed	Caroline M. Breyfogle.
Defiance	Defiance College	Coed	Adelia Wilson.
Delaware	Ohio Wesleyan University	Coed	Cyrus B. Austin.[3]
Findlay	Findlay College	Coed	Ethel Fox.
Granville	Denison University	Coed	Clara M. Brumback.[4]
Hiram	Hiram College	Coed	
Marietta	Marietta College	Coed	
New Athens	Franklin College	Coed	Maud Elder.
New Concord	Muskingum College	Coed	Anna K. Moore.
Oberlin	Oberlin College	Coed	Florence M. Fitch.[5]
Oxford	Miami University	Coed	Elizabeth Hamilton.
Do	Oxford College for Women	Women	
Do	Western College for Women	Women	Mary A. Sawyer.
Painesville	Lake Erie College	Women	Lilian A. Brownfield.
Rio Grande	Rio Grande College	Coed	
Springfield	Wittenberg College	Coed	
Tiffin	Heidelberg University	Coed	Mary I. Park.
Toledo	Toledo University	Coed	Mrs. S. B. Hulliday.
Westerville	Otterbein University	Coed	Cora A. McFadden.
Wilberforce	Wilberforce University (colored)	Coed	Mrs. Josephine Washington.
Wilmington	Wilmington College	Coed	Faith Austin.
Wooster	College of Wooster	Coed	Amelia Doddridge.
Yellowsprings	Antioch College	Coed	
OKLAHOMA.			
Chickasha	Oklahoma College for Women	Women	
East Enid	Phillips University	Coed	Beulah B. Boggess.
Guthrie	Methodist University of Oklahoma	Coed	Alberta B. Jones.
Kingfisher	Kingfisher College	Coed	
Norman	University of Oklahoma	Coed	Elizabeth Jordan, adviser.
Stillwater	Oklahoma Agricultural and Mechanical College.	Coed	Ruth Michaels.[1]
Tulsa	Henry Kendall College	Coed	
OREGON.			
Albany	Albany College	Coed	Winslow Hutchinson.
Corvallis	Oregon Agricultural College	Coed	Mrs. Mary E. Fawcett.
Eugene	University of Oregon	Coed	Louise Ehrmann.
Forest Grove	Pacific University	Coed	Mary F. Farnham.
McMinnville	McMinnville College	Coed	Isabel M. Grover.
Newberg	Pacific College	Coed	
Portland	Reed College	Coed	
Salem	Willamette University	Coed	Alice Mae Roberts.
PENNSYLVANIA.			
Allentown	Allentown College for Women	Women	Mrs. Julia B. Hensel.
Annville	Lebanon Valley College	Coed	Reba F. Lehman.
Beaver	Beaver College	Women	Alta M. Bailey.
Beaver Falls	Geneva College	Coed	Helen E. McClintock.
Bethlehem	Moravian Seminary and College for Women.	Women	
Bryn Mawr	Bryn Mawr College	Women	Helen H. Taft.[6]

[1] **Head of department of home economics.**

[2] **Dean of College for Women.**

[3] **Kathryn S. McLean, associate dean.**

[4] **Acting dean of Shepardson College.**

[5] **Anna B. Doerschuk, associate dean.**

[6] **Dean of college and adviser to undergraduates; Isabel Maddison, adviser for graduate students.**

XIX.—Universities and Colleges—Deans of Women—Continued.

Location.	University or college.	For women, or coeducational.	Name of dean.
PENNSYLVANIA—contd.			
Carlisle	Dickinson College	Coed	
Chambersburg	Wilson College	Women	Harriet R. Congdon.
Collegeville	Ursinus College	Coed	Mrs. C. B. Tower.
Gettysburg	Pennsylvania College	Coed	
Greenville	Thiel College	Coed	Signe I. Swensson.
Grove City	Grove City College	Coed	Mrs. Lois Cory-Thompson.
Huntingdon	Juniata College	Coed	
Lewisburg	Bucknell University	Coed	Anna R. Carey.
Meadville	Allegheny College	Coed	Alice H. Spalding.
Mechanicsburg	Irving Female College	Women	Katherine G. Wheelock.
Myerstown	Albright College	Coed	Mrs. Luella D. Mohn, preceptress.
New Wilmington	Westminster College	Coed	Sarah J. Knott.
Philadelphia	Drexel Institute	Coed	Mabel D. Cherry.
Do	Dropsie College	Coed	
Do	Temple University	Coed	Laura H. Carnell.
Do	University of Pennsylvania	Coed	Frank P. Graves.[1]
Pittsburgh	Carnegie Institute of Technology	Coed	Mary B. Breed.[2]
Do	Pennsylvania College for Women	Women	Florence K. Root.
Do	University of Pittsburgh	Coed	Pearl Marshall.
Selinsgrove	Susquehanna University	Coed	
State College	Pennsylvania State College	Coed	Lucretia V. T. Simmons.
Swarthmore	Swarthmore College	Coed	Edna H. Richards.
Waynesburg	Waynesburg College	Coed	Sarah E. Martin.
PORTO RICO.			
San Juan	University of Porto Rico	Coed	
RHODE ISLAND.			
Kingston	Rhode Island State College	Coed	Bessie E. Bemis.
Providence	Brown University	Coed	Lida S. King.[4]
SOUTH CAROLINA.			
Clinton	Presbyterian College of South Carolina.	Coed	
College Place	Columbia College	Women	Lucile Johnson.
Columbia	Benedict College (colored)	Coed	Frances Schuyler.
Do	Chicora College for Women	Women	
Do	University of South Carolina	Coed	Mrs. B.L.Parkinson, matron.
Due West	Erskine College	Coed	
Do	Woman's College of Due West	Women	
Greenville	Greenville Woman's College	Women	
Greenwood	Lander College	Women	
Hartsville	Coker College for Women	Women	
Newberry	Newberry College	Coed	
Spartanburg	Converse College	Women	Mrs. Sarah M. Huber.
SOUTH DAKOTA.			
Brookings	South Dakota State College of Agriculture and Mechanic Arts.	Coed	Miriam Gerlach, adviser.
Huron	Huron College	Coed	Mary E. Scruby.
Mitchell	Dakota Wesleyan University	Coed	Maine L. Ogin.
Rapid City	State School of Mines	Coed	
Sioux Falls	Sioux Falls College	Coed	Cecil Stone.
Vermilion	University of South Dakota	Coed	Anne Henley.
Yankton	Yankton College	Coed	Ruth E. Reed.
TENNESSEE.			
Chattanooga	University of Chattanooga	Coed	Mrs. Flora G. Hart, preceptress.
Greenville	Tusculum College	Coed	Edith L. Stetson.[5]
Harrogate	Lincoln Memorial University	Coed	Vryling W. Buffum.
Jackson	Union University	Coed	
Jefferson City	Carson and Newman College	Coed	
Knoxville	Knoxville College (colored)	Coed	Margaret Beveridge.[6]
Do	University of Tennessee	Coed	Caroline Carpenter.
Lebanon	Cumberland University	Coed	
McKenzie	Bethel College	Coed	

[1] Dean of the School of Education; no dean of women appointed for the university.
[2] Dean of Margaret Morrison Carnegie School.
[3] Head of home economics course.
[4] Dean of the Women's College in Brown University.
[5] Director of home economics.
[6] Superintendent farm, woman's division.

XIX.—UNIVERSITIES AND COLLEGES—DEANS OF WOMEN—Continued.

Location.	University or college.	For women, or coeducational.	Name of dean.
TENNESSEE—continued.			
Maryville	Maryville College	Coed	Mary E. Caldwell.
Murfreesboro	Tennessee College	Women	
Nashville	Fisk University (colored)	Coed	Mrs. Ella W. Brown.
Do	George Peabody College for Teachers.	Coed	
Do	Vanderbilt University	Coed	
Spencer	Burritt College	Coed	
Washington College	Washington College	Coed	
TEXAS.			
Abilene	Simmons College	Coed	Rosa B. Breedlove.
Austin	University of Texas	Coed	Mrs. Helen M. Kirby.
Belton	Baylor Female College	Women	Evaline Campbell.
Brownwood	Daniel Baker College	Coed	
Do	Howard Payne College	Coed	
Dallas	Southern Methodist University	Coed	Mrs. B. H. Guilbeau.
Denton	College of Industrial Arts	Women	Lina Perlitz.
Fort Worth	Texas Woman's College	Women	Ada B. Stapleton.
Do	Texas Christian University	Coed	E. W. McDiarmid.
Georgetown	Southwestern University	Coed	Laura Kuykendall.
Houston	Rice Institute	Coed	Mrs. Sara Stratford, adviser.
Tehuacana	Westminster College	Coed	
Waco	Baylor University	Coed	Mrs. T. H. Claypool.
Waxahachie	Trinity University	Coed	
UTAH.			
Logan	Agricultural College of Utah	Coed	Mrs. George R. Hill, adviser.
Salt Lake City	University of Utah	Coed	Lucy M. Van Cott.
VERMONT.			
Burlington	University of Vermont and State Agricultural College.	Coed	Mrs. Mary B. Stetson, adviser.
Middlebury	Middlebury College	Coed	Eleanor S. Ross.
VIRGINIA.			
Abingdon	Martha Washington College	Women	
Bridgewater	Bridgewater College	Coed	
Hollins	Hollins College	Women	Mary Williamson.[1]
Lynchburg	Randolph-Macon Woman's College.	Women	Meta Glass.[2]
Manassas	Eastern College	Coed	
Richmond	Richmond College	Coed	May L. Keller.[3]
Salem	Elizabeth College	Women	Irene B. Palmer.
Sweet Briar	Sweet Briar College	Women	Emilie W. McVea.[4]
WASHINGTON.			
Pullman	State College of Washington	Coed	Rhoda M. White.
Seattle	University of Washington	Coed	Ethel M. Coldwell.
Tacoma	College of Puget Sound	Coed	Mrs. Stella T. Patterson.
Walla Walla	Whitman College	Coed	Helen M. Burr.
WEST VIRGINIA.			
Bethany	Bethany College	Coed	Mrs. Anna R. Bourne.
Buckhannon	West Virginia Wesleyan College	Coed	Edna Smith.
Elkins	Davis and Elkins College	Coed	
Morgantown	West Virginia University	Coed	Susan M. Moore.
WISCONSIN.			
Appleton	Lawrence College	Coed	Maud Gaeckler.
Beloit	Beloit College	Coed	Mrs. Gladys Sleeper
Madison	University of Wisconsin	Coed	Louise F. Nardin.
Milton	Milton College	Coed	
Milwaukee	Milwaukee-Downer College	Women	Mina Kerr.
Plymouth	Mission House	Coed	Josephine King, adviser.
Ripon	Ripon College	Coed	
Sinsinawa	St. Clara College and Academy	Women	Sister M. Clementine.
Waukesha	Carroll College	Coed	Mrs. Agnes E. Tucker, acting.
WYOMING.			
Laramie	University of Wyoming	Coed	Mrs. Emma H. Knight, adviser.

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[1] Chairman Faculty Committee on Student Government.

[2] On leave.

[3] Dean of Westhampton College.

[4] President.

XX.—JUNIOR COLLEGES.

Location.	Name of institution.	President.
Marion, Ala	Marion Institute	Hopson O. Murfee, LL. D.
Eureka Springs, Ark	Crescent College	Richard R. Thompson.
Auburn, Cal	Junior College[1]	J. F. Engle, Ph. D.
Azusa, Cal	Junior College[1]	E. R. Hulbirt, dean.
Bakersfield, Cal	Junior College[1]	Paul Vandereike, dean.
Fresno, Cal	Junior College[1]	Walter O. Smith, A. M.
Fullerton, Cal	Junior College[1]	W. T. Boyce, A. M., dean.
Los Angeles, Cal	Junior College (Hollywood H. S.)	W. H. Snyder, D. Sc.
Los Angeles, Cal	Junior College (Polytechnic H. S.)	Willis A. Dunn, A. M.
Palo Alto, Cal	Junior College[1]	Roy L. Wilbur, A. M.
Pomono, Cal	Junior College[1]	W. A. Bartlett, A. M., dean.
Sacramento, Cal	Junior College[1]	E. J. Berringer, M. L.
San Diego, Cal	Junior College[1]	Mott H. Arnold, A. M.
San Luis Obispo, Cal	Junior College[1]	Richard H. Platt, A. B., dean.
Santa Ana, Cal	Junior College[1]	D. K. Hammond, A. B.
Santa Barbara, Cal	Junior College[1]	Eldon Ford, A. B., dean.
Yreka, Cal	Junior College[1]	E. L. Van Dellen, A. M.
Cuthbert, Ga	Andrew College	F. G. Branch, B. S.
McRae, Ga	South Georgia College	G. W. Hutchison, A. B.
Young Harris, Ga	Young L. G. Harris College	John L. Hall, A. B.
Pocatello, Idaho	Idaho Technical Institute	Miles F. Reed, A. M.
Aledo, Ill	William and Vashti College	Roy F. Swift, Ph. D.
Carlinville, Ill	Blackburn College	Wm. M. Hudson, D. D.
Chicago, Ill	Crane Junior College	Wm. J. Bartholf.
Godfrey, Ill	Monticello Seminary	Harriet R. Congdon, A. M.
Joliet, Ill	Junior College[1]	Stanley Brown, LL. D.
Mount Carroll, Ill	Frances Shimer School	Wm. P. McKee, A. M.
Peoria, Ill	Bradley Polytechnic Institute	Theodore C. Burgess, Ph. D.
Lamoni, Iowa	Graceland College	George N. Briggs, A. B.
Holton, Kans	Junior College[1]	Emery W. Leamer, A. B.
Danville, Ky	Kentucky College for Women	M. M. Allen, D. D.
Lexington, Ky	Hamilton College for Women	Thomas A. Hendrick, A. M.
Lexington, Ky	Sayre College	A. S. Venable, A. B.
Russellville, Ky	Logan Female College	George H. Crowell, Ph. D.
Mansfield, La	Mansfield Female College	R. E. Bobbitt, B. S.
Detroit, Mich	Junior College[1]	David MacKenzie, A. M.
Grand Rapids, Mich	Junior College[1]	Jesse B. Davis, A. M.
Hibbing, Minn	Junior College[1]	G. W. Willett, A. M.
Rochester, Minn	Junior College[1]	James B. Mack, A. M.
Holly Springs, Miss	Mississippi Synodical College	T. W. Raymond, D. D.
Albany, Mo	Palmer College	E. A. Watkins, D. D.
Columbia, Mo	Christian College	Mrs. L. W. St. Claire-Moss, A. B.
Columbia, Mo	Stephns College	James M. Wood, A. M.
Fayette, Mo	Howard Payne College	Henry E. Stout, A. B.
Fulton, Mo	Synodical College for Girls	John James, A. B.
Fulton, Mo	William Woods College	Joseph A. Serena, A. B.
Glasgow, Mo	Pritchett College	Oscar Dahlene, M. S.
Kansas City, Mo	Kansas City Polytechnic Institute	B. M. Stigall, A. M.
Mexico, Mo	Hardin College	Z. J. Edgo, D. D.
Morrisville, Mo	Scarritt-Morrisville College	A. M. Norton, A. M.
Nevada, Mo	Cottey College	Mrs. V. A. C. Stockard, A. M.
St. Charles, Mo	Lindenwood College	John L. Roemer, D. D.
St. Louis, Mo	Forest Park College	Mrs. Anna S. Cairns.
Lenoir, N. C	Davenport College	James B. Craven.
Louisburg, N. C	Louisburg College	Franklin S. Love, A. M.
Weaverville, N. C.	Weaver College	Eugene Blake, D. D.
Milton, Oreg	Columbia College	H. S. Shangle.
Jackson, Tenn	Memphis Conference Female Institute	E. R. Naylor, A. B.
Madisonville, Tenn	Hiwassee College	J. E. Lowry, A. M.
Pulaski, Tenn	Martin College	Wm. T. Wynn, A. B.
Claredon, Tex	Claredon College	G. S. Slover, A. M.
Decatur, Tex	Decatur Baptist College	J. L. Ward, A. M.
Greenville, Tex	Burleson College	Basil E. Masters, A. B.
Greenville, Tex	Wesley College	S. E. Green, A. B.
Jacksonville, Tex	Alexander College	R. G. Boyer, A. M.
Meridian, Tex	Meridian College	G. F. Winfield, A. M.
San Antonio, Tex	Westmoorland College	J. W. Repass, A. M.
Sherman, Tex	North Texas College	Edwin Kidd.
Stamford, Tex	Stamford College	
Terrell, Tex	Texas Military College	Louis C. Perry, Ph. D.
Thorp Springs, Tex	Thorp Springs Christian College	W. F. Ledlow, A. M.
Abingdon, Va	Stonewall Jackson College	John R. Dobyns, LL. D.
Blackstone, Va	Blackstone College for Girls	W. Asbury Christian. D. D.
Bristol, Va	Sullins College	W. E. Martin, Ph. D.
Bristol, Va	Virginia Intermont College	H. G. Noffsinger, A. M.
Daleville, Va	Daleville College	T. S. Moherman, D. D.
Danville, Va	Averette College	C. E. Crosland, A. B.
Marion, Va	Marion College	C. Brown Cox, A. M.
Petersburg, Va	Southern College	Arthur K. Davis, A. M.
Roanoke, Va	Virginia College	Mattie P. Harris.
Staunton, Va	Mary Baldwin College	Marianna P. Higgins.
Everett, Wash	Junior College[1]	W. J. Marquis.
Barboursville, W. Va	Morris Harvey College	U. V. W. Darlington, D. D.
Louisburg, W. Va	Louisburg Seminary	Robert H. Adams, A. M.

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[1] Part of public school system.

XI.—PRESIDENTS AND SECRETARIES OF BOARDS OF TRUSTEES OF UNIVERSITIES AND COLLEGES.

Location.	University or college.	President of board of trustees.	Secretary of board of trustees.
ALABAMA.			
hens	Athens College for Young Women.	W. T. Sanders	H. B. Malone.
burn	Alabama Polytechnic Institute	Gov. Charles Henderson.	Lucile Burton.
rmingham	Birmingham College	R. S. Munger	E. M. Glenn.
Do	Howard College	James B. Ellis	W. J. Waldrop.
eensboro	Southern University	J. S. Frazer	E. A. Dannelly.
arion	Judson College	Ernest Lamar	T. T. Daughdrill.
ontgomery	Women's College of Alabama	M. W. Swartz, Ph. D.	J. M. Donnelly, D. D.
Bernard	St. Bernard College	Bernard Menges, O.S.B	Charles Fries, O. S. B.
ring Hill	Spring Hill College	E. Cummings, S. J.	John J. Navin, S. J.
scaloosa	Central Female College	H. B. Foster	John T. Bealle.
iversity	University of Alabama	Gov. Charles Henderson.	Robison Brown.
ARIZONA.			
cson	University of Arizona	William V. Whitmore.	William Jennings Bryan, jr.
ARKANSAS.			
kadelphia	Henderson-Brown College	Rev. James M. Workman.	Leslie Goodloe.
Do	Ouachita College		
tesville	Arkansas College	James P. Coffin	J. L. Boggs.
arksville	Arkansas Cumberland College	Wiley L. Harie	W. H. H. Shibley.
nway	Central College	J. P. Runyan, M. D.	J. F. Jones.
Do	Hendrix College	James Thomas	V. D. Hill.
yetteville	University of Arkansas	Hon. Charles H. Brough.	W. H. Cravens.
CALIFORNIA.			
rkeley	University of California[1]	Hon. William D. Stephens.	Ralph P. Merritt.
aremont	Pomona College	George W. Marston	Charles B. Sumner.
s Angeles	Occidental College	D. B. Gamble	W. S. Young.
Do	St. Vincents College		
Do	University of Southern California.	Bishop Adna W. Leonard.	A. E. Pomeroy.
lls College	Mills College	George C. Edwards	Louisa P. Johnston.
kland	St. Mary's College	James E. Curran	A. A. McKinnon.
sadena	Throop College of Technology	Arthur H. Fleming	Edward C. Barrett.
dlands	University of Redlands	Mattison B. Jones	J. W. Curtis.
Helena	Pacific Union College	E. E. Andross	Claude Conard.
n Francisco	St. Ignatius University	Patrick J. Foote, S. J.	D. J. Mahoney, S. J.
n Jose	College of the Pacific	Rolla V. Watt	H. E. Milnes.
nta Clara	University of Santa Clara	Walter F. Thornton, S. J.	Joseph W. Riordan, S. J.
anford University	Leland Stanford Junior University.	William M. Newhall	Leon Sloss.
hittier	Whittier College	William V. Coffin	Lydia J. Jackson.
COLORADO.			
ulder	University of Colorado[1]	George Norlin, acting president.	Frank H. Wolcott.
lorado Springs	Colorado College		Willis L. Armstrong.
nver	College of the Sacred Heart	J. J. Brown	W. J. Fitzgerald.
Do	University of Denver	William G. Evans	Frost Craft.
rt Collins	Colorado Agricultural College	A. A. Edwards	L. M. Taylor.
lden	Colorado School of Mines	F. G. Willis	James T. Smith.
eeley	Colorado State Teachers College.	H. V. Kepner	A. J. Park.
ntclaire	Colorado Woman's College	A. H. Stockham	Rufus G. Gentry.
CONNECTICUT.			
rtford	Trinity College	Flavel S. Luther	Edgar F. Waterman.
ddletown	Wesleyan University	John C. Clark	David G. Downey.
w Haven	Yale University	Arthur Twining Hadley.	Anson Phelps Stokes.
w London	Connecticut College for Woman	Benjamin T. Marshall.	Elizabeth C. Wright.
rrs	Connecticut Agricultural College	Gov. Marcus H. Holcomb, ex-officio.	O. F. King.
DELAWARE.			
wark	Delaware College	Henry B. Thompson	Charles B. Evans.

[1] Board of regents

XXI.—PRESIDENTS AND SECRETARIES OF BOARDS OF TRUSTEES OF UNIVERSITIES AND COLLEGES—Continued.

Location.	University or college.	President of board of trustees.	Secretary of board of trustees.
DISTRICT OF COLUMBIA.			
Washington	American University	Benjamin F. Leighton	Charles W. Baldwin.
Do	Catholic University of America	James Cardinal Gibbons.	Right Rev. J. F. R[illegible] Canevin.
Do	Gallaudet College	Percival Hall	Ulysses G. B. Pierce.
Do	Georgetown University	John B. Creeden, S. J.	Edmund A. Walsh, S. J.
Do	George Washington University	John Bell Larner, chairman.	Elmer Louis Kayser.
Do	Howard University (colored)	Stanton J. Peelle	George W. Cook.
Do	St. John's College	Brother Philip	Brother Denis.
Do	Trinity College	James Cardinal Gibbons.	Sister Gertrude.
FLORIDA.			
De Land	John B. Stetson University	John B. Stetson, jr	Silas B. Wright.
Gainesville	University of Florida [1]	J. L. Earman	Bryan Mack.
Lake City	Columbia College	Hon. J. S. Blitch	Rev. Dr. W. L. G. Mahon.
Sutherland	Southern College	J. B. Mitchel	L. W. Moore.
Tallahassee	Florida State College for Women.	Joe L. Earman, chairman.	Bryan Mack.
Winter Park	Rollins College	C. H. French	W. R. O'Neal.
GEORGIA.			
Athens	University of Georgia	Henry D. McDaniel	T. W. Reed.
Atlanta	Atlanta University (colored)	Edward T. Ware	William B. Matthews.
Do	Georgia School of Technology	N. E. Harris	James S. Akers.
Do	Morehouse College (colored)	John F. Purser	E. R. Carter.
Do	Morris Brown University (colored).	William A. Fountain	William D. Johnson.
College Park	Cox College	H. M. Willett, chairman.	E. C. James.
Cuthbert	Andrew College	J. B. Wight	C. W. Curry.
Dahlonega	North Georgia Agricultural College.	W. B. McCants	R. Baker.
Decatur	Agnes Scott College	J. K. Orr, chairman	F. [illegible] Gaines.
Demorest	Piedmont College	Philip F. Moxom	G. Butler.
Forsyth	Bessie Tift College	O. H. B. Bloodworth	Samuel Rutherford
Gainesville	Brenau College	H. H. Perry	J. [illegible] Hosch.
Lagrange	Lagrange College	John M. Barnard	Frank Harwell.
Do	Southern Female College	L. J. Render	R. L. Render.
Macon	Mercer University	W. B. Hardman	E. S. Davis.
Do	Wesleyan Female College	W. N. Ainsworth	George B. Jewett.
Oxford	Emory University	Asa G. Candler	W. D. Thomson.
Rome	Shorter College	J. P. Cooper	W. M. Harbin.
South Atlanta	Clark University (colored)	F. D. Leete	W. H. Crogman.
HAWAII.			
Honolulu	College of Hawaii	W. R. Farrington	A. L. Dean.
IDAHO.			
Caldwell	College of Idaho	David A. Clemens, chairman.	L. S. Dille.
Moscow	University of Idaho [2]	Evan Evans	J. A. Keefer.
ILLINOIS.			
Abingdon	Hedding College	C. F. W. Smith	W. H. Craine.
Aledo	William and Vashti College	Henry E. Burgess	David A. Hebel.
Alton	Shurtleff College	A. A. Curry	John Leverett.
Aurora	Aurora College	James R. Singleterry	William J. Watson
Bloomington	Illinois Wesleyan University	Sam Welty	F. M. Austin.
Bourbonnais	St. Viator College	J. P. O'Mahoney, C. S. V.	W. J. Bergin, C. S. V.
Carlinville	Blackburn College	Ira W. Allen	Thomas Rinaker.
Carthage	Carthage College	C. H. Boyer	H. C. Sprick.
Chicago	Armour Institute of Technology.	J. Ogden Armour	Frederick U. Smith.
Do	De Paul University	F. X. McCabe, C. M.	D. J. McHugh, C. M.
Do	Lewis Institute	La Verne Noyes	Charles S. Cutting.
Do	Loyola University	John B. Furay, S. J.	Albert Esterman, S. J.
Do	University of Chicago	Martin A. Ryerson	J. Spencer Dickerson.
Decatur	James Millikin University	W. J. Darby	H. E. Starkey.
Eureka	Eureka College	T. J. McGuire	L. O. Lehman

[1] Board of control.

[2] State board of education and board of regents of University of Idaho.

XXI.—PRESIDENTS AND SECRETARIES OF BOARDS OF TRUSTEES OF UNIVERSITIES AND COLLEGES—Continued.

Location.	University or college.	President of board of trustees.	Secretary of board of trustees.
ILLINOIS—continued.			
Evanston	Northwestern University	James A. Patten	Frank Philip Crandon.
Ewing	Ewing College	J. D. Hooker	F. L. Karn.
Galesburg	Knox College	W. E. Simonds, acting president	Alvah S. Green.
Do	Lombard College	Lyman McCarl	Ralph M. Atterbury
Godfrey	Monticello Seminary	Edward P. Wade	Charles A. Caldwell.
Greenville	Greenville College	Franklin H. Ashcraft	S. W. Andrews, jr.
Jacksonville	Illinois College	Andrew Russel	Carl E. Black.
Do	Illinois Woman's College	T. J. Pitner	Joseph R. Harker.
Knoxville	St. Mary's School	M. Edward Fawcett	Charles W. Leffingwell.
Lake Forest	Lake Forest College	Clayton Mark	John H. S. Lee.
Lebanon	McKendree College	Hon. Charles S. Deneen	James C. Dolley.
Lincoln	Lincoln College	J. E. Miller	J. H. Boyd.
Monmouth	Monmouth College	Thomas H. McMichael	Ivory Quinby.
Mount Carroll	Frances Shimer School		William P. McKee.
Naperville	Northwestern College	G. Heinmiller	E. M. Spreng.
Peoria	Bradley Polytechnic Institute	John M. Niehaus	W. W. Hammond.
Rockford	Rockford College	Edward P. Lathrop	George O. Forbes.
Rock Island	Augustana College	Joseph A. Anderson	Theodore Ekblad.
Urbana	University of Illinois	William L. Abbott	H. E. Cunningham.
Wheaton	Wheaton College	Charles A. Blanchard	F. W. Smith.
INDIANA.			
Bloomington	Indiana University	Theodore F. Rose	John W. Cravens.
Collegeville	St. Joseph's College	George Hindelang, C. PP. S.	Ignatius Wagner. C. PP. S.
Crawfordsville	Wabash College	Albert D. Thomas	Theodore H. Ristine.
Earlham	Earlham College	Amos K. Hollowell	Mary A. Stubbs.
Fort Wayne	Concordia College	Rev. A. Lange, chairman.	Rev. W. E. Moll.
Franklin	Franklin College	Grafton Johnson	Will A. Burton.
Goshen	Goshen College	H. F. Reist	D. D. Miller
Greencastle	De Pauw University	Hugh Dougherty	H. H. Hornbrook.
Hanover	Hanover College	Jasper W. La Grange	R. S. Lawrence.
Indianapolis	Butler College	Hilton U. Brown	Barton W. Cole.
Do	Indiana Central University	J. W. Lake	A. D. Smith.
Lafayette	Purdue University	Joseph D. Oliver	Edward A. Ellsworth.
Merom	Union Christian College	C. B. Hershey	Oault W. Pleasant.
Moores Hill	Moores Hill College	E. V. Hawkins	M. A. Farr.
Notre Dame	St. Mary's College and Academy	Mother M. Perpetua	Mother M. Aquina.
Do	University of Notre Dame	Andrew Morrissey, Ph. D.	William Conner.
Oakland City	Oakland City College	D. E. Montgomery	J. P. Cox.
Terre Haute	Rose Polytechnic Institute[1]	W. C. Ball	Paul N. Bogart.
Upland	Taylor University	John C. White, D. D.	H. T. Connelly.
Valparaiso	Valparaiso University	Henry B. Brown	John E. Roessler.
Vincennes	Vincennes University	W. M. Hindman	W. B. Robinson.
IOWA.			
Ames	Iowa State College of Agriculture and Mechanic Arts.	D. D. Murphy	W. H. Gemmill.
Cedar Falls	Iowa State Teachers College	do	Do.
Cedar Rapids	Coe College	E. R. Burkhalter	John S. Ely.
Clinton	Wartburg College	G. A. Fandrey	H. Brueckner.
Decorah	Luther College	C. K. Preus	O. L. Olson.
Des Moines	Des Moines College	J. R. Vaughan	Nelson Royal.
Do	Drake University	Keith Vawter, chairman.	George A. Jewett.
Dubuque	Dubuque College		Albert S. Peikert.
Fairfield	Parsons College	Archibald Cardle, D.D.	Charles J. Fulton.
Fayette	Upper Iowa University	N. A. Mershon	C. R. Carpenter.
Grinnell	Grinnell College	John H. T. Main	H. W. Somers.
Hopkinton	Lenox College		W. H. Ensign.
Indianola	Simpson College	A. V. Proudfoot	J. H. Henderson.
Iowa City	State University of Iowa	D. D. Murphy	W. H. Gemmill.
Iowa Falls	Ellsworth College	Silas M. Weaver	F. D. Peet.
Lamoni	Graceland College	Albert Carmichael	J. F. Garver.
Mount Pleasant	Iowa Wesleyan College	Hugh A. Cole	Thomas Osborn.
Mount Vernon	Cornell College	Charles W. Flint	Hamline H. Freer.
Oskaloosa	Penn College	William A. Johnson	I. W. Cook.
Pella	Central University of Iowa	B. F. Brinkman	John Wesselink.
Sioux City	Morningside College	E. C. Heilman	F. O. Barz.
Storm Lake	Buena Vista College	W. C. Edson	Dr. W. M. Storey.
Tabor	Tabor College	Nelson W. Wehrhan	Mary Anna Reed.
Toledo	Leander Clark College[2]	J. H. Yaggy	E. A. Benson.
University Park	Central Holiness University	W. M. Bair	H. E. Rosenberger.

[1] Board of managers.

[2] Has discontinued sessions for the period of the war.

XXI.—PRESIDENTS AND SECRETARIES OF BOARDS OF TRUSTEES OF UNIVERSITIES AND COLLEGES—Continued.

Location.	University or college.	President of board of trustees.	Secretary of board of trustees.
KANSAS.			
Atchison	Midland College	E. E. Stauffer	R. B. Peery.
Do	St. Benedict's College	Innocent Wolf, O.S.B.	Damian Lavery, O.S.B.
Baldwin	Baker University	Nelson Case	Charles E. Beeks.
Emporia	College of Emporia	William Foulkes	H. C. Culbertson.
Highland	Highland College	William M. Boone	Tobias Larson.
Kansas City	Kansas City University	Bishop Cyrus J. Kephart.	Judge F. T. Woodburn.
Lawrence	University of Kansas	Gov. Arthur Capper	W. N. Mason.
Lindsborg	Bethany College	Alfred Bergin	Andrew Monson.
McPherson	McPherson College	J. J. Yoder	H. J. Harnly.
Manhattan	Kansas State Agricultural College.	Gov. Arthur Capper, chairman.	Lee Harrison.
Ottawa	Ottawa University	A. S. Olin	W. A. Elliott.
St. Marys	St. Mary's College	William J. Wallace, S. J.	Simon A. Ryan, S. J.
Salina	Kansas Wesleyan University	T. W. Roach	C. W. Stevens.
Sterling	Cooper College	R. T. Campbell	W. E. Currie.
Topeka	Washburn College	P. P. Womer	Ella May Pixley.
Wichita	Fairmount College	H. W. Darling	Robert L. Holmes.
Do	Friends University	L. Clarkson Henshaw	Dr. Thomas J. Carter.
Winfield	Southwestern College	A. O. Ebright	T. E. Hinshaw.
KENTUCKY.			
Berea	Berea College	William G. Frost	A. E. Thompson.
Bowling Green	Ogden College	Max B. Nahm	D. W. Wright.
Danville	Central University of Kentucky	A. J. A. Alexander	J. A. Cheek.
Do	Kentucky College for Women	John A. Quisenberry	Do.
Georgetown	Georgetown College	G. H. Nunnelly	J. W. Thacker.
Hopkinsville	Bethel Woman's College	C. M. Thompson	T. W. Blakey.
Lexington	Hamilton College for Women	J. S. Botts	Mrs. Charles A. Thomas.
Do	Sayre College	Clifton B. Ross	E. D. Veach.
Do	University of Kentucky	Hon. A. O. Stanley	Wellington Patrick.
Do	Transylvania College	W. Hume Logan	Hogan Yancey.
Louisville	University of Louisville	A. Y. Ford	W. H. Bradbury.
Russellville	Bethel College	W. C. Nourse	H. L. Trimble.
Do	Logan Female College	F. F. Gibson, D. D.	A. P. Lyon.
St. Mary	St. Mary's College	Michael Jaglowicz, C. R.	Ignatius Perius, C. R.
Winchester	Kentucky Wesleyan College	E. G. B. Mann, D. D.	J. P. Strother.
LOUISIANA.			
Baton Rouge	Louisiana State University and Agricultural and Mechanical College.	Hon. R. G. Pleasant	A. T. Prescott.
Clinton	Silliman Collegiate Institute	D. F. Wilkinson	D. M. Pipes.
Convent	Jefferson College		
Mansfield	Mansfield Female College	R. T. Moore	R. E. Babbits.
New Orleans	H. Sophie Newcomb Memorial College for Women.	R. M. Walmsley	L. A. Wogan.
Do	Loyola University	A. E. Otis, S. J.	Michael J. Walsh, S. J.
Do	Tulane University of Louisiana	Robert Sharp, Ph. D.	L. A. Wogan.
Pineville	Louisiana College	Z. R. Lawhon	C. Cottingham.
MAINE.			
Brunswick	Bowdoin College	Kenneth C. M. Sills	Barrett Potter.
Lewiston	Bates College	George C. Chase	Franklin M. Drew.
Orono	University of Maine	Samuel W. Gould	Thomas V. Doherty.
Van Buren	Van Buren College (St. Mary's)	C. J. Barth, S. M.	Henry Seiller, C. M.
Waterville	Colby College	Leslie C. Cornish	Charles E. Owen.
MARYLAND.			
Annapolis	St. John's College	Gov. Emerson C. Harrington.	L. Dorsey Gassaway.
Do	United States Naval Academy	Rear Admiral E. W. Eberle, chairman of Academic Board.	Com. John Downes, secretary of Academic Board.
Baltimore	Goucher College	Summerfield Baldwin	George A. Solter.
Do	Johns Hopkins University	R. Brent Keyser	Henry D. Harlan.
Do	Loyola College	Jos. A. McEneany, S. J.	Richard A. Fleming, S. J.
Do	University of Maryland[1]	Dr. Thos. Fell, provost	Dr. Wm. S. Gardner.
Do	Morgan College (colored)	John F. Goucher	Joseph H. Lockerman.
Do	Mount St. Joseph's College	Brother Isadore, C. F. X.	Brother Philip, C. F. X.
Chestertown	Washington College	Lewin W. Wickes	H. W. Vickers.

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[1] Board of regents.

XXI.—Presidents and Secretaries of Boards of Trustees of Universities and Colleges—Continued.

Location.	University or college.	President of board of trustees.	Secretary of board of trustees.
MARYLAND—contd.			
College Park	Maryland State College of Agriculture.	S. M. Shoemaker, chairman.	W. W. Skinner
Ellicott City	Rock Hill College	Brother Philip, F. S. C.	Brother Julius, F. S. C.
Emmitsburg	Mount St. Mary's College	Right Rev. Mgr. Bernard J. Bradley.	Rev. Edward B. Jordan, S. T. D.
Frederick	Hood College	William C. Schaeffer	Frederick A. Rupley.
Lutherville	Maryland College for Women [1]	Ezra K. Bell, D. D.	James S. Nussear.
New Windsor	Blue Ridge College	Charles D. Bonsack	Herbert G. Englar.
Westminster	Western Maryland College	Charles Billingslea	T. H. Lewis.
MASSACHUSETTS.			
Amherst	Amherst College	George A. Plimpton	Williston Walker.
Do	Massachusetts Agricultural College.	Charles A. Gleason	Wilfred Wheeler.
Boston	Boston College	C. W. Lyons, S. J	John S. Keating, S. J.
Do	Boston University	John L. Bates	George S. Butters.
Do	Simmons College	Henry Lefavour	John W. Bartol.
Cambridge	Harvard University [2]	Robert Grant	Winthrop H. Wade.
Do	Massachusetts Institute of Technology.	Richard C. MacLaurin	James P. Munroe.
Do	Radcliffe College	Le Baron R. Briggs	Anna Wellington Wolbach.
Northampton	Smith College	William Allan Neilson.	Charles N. Clark.
Norton	Wheaton College	Samuel V. Cole	Annie M. Kilham.
South Hadley	Mount Holyoke College	Joseph A. Skinner	Francis Parsons.
Tufts College	Tufts College	Austin B. Fletcher	Edmund W. Kellogg.
Wellesley	Wellesley College	Edwin F. Greene	Miss Sarah Lawrence.
Williamstown	Williams College	Harry A. Garfield	Willard E. Hoyt.
Worcester	Clark University	A. George Bullock	G. Stanley Hall.
Do	Clark College	do	Do.
Do	College of the Holy Cross	Joseph N. Dinand, S. J.	James A. Mullen, S. J.
Do	Worcester Polytechnic Institute.	Charles G. Washburn.	Charles Baker.
MICHIGAN.			
Adrian	Adrian College	Myron W. Hoisintgon.	Ely D. Miller.
Albion	Albion College	E. J. Phelps	Samuel Dickie.
Alma	Alma College	James M. Barkley	Albert P. Cook.
Ann Arbor	University of Michigan [3]	Harry B. Hutchins	Shirley W. Smith.
Detroit	University of Detroit	William T. Doran, S. J.	Henry W. Otting, S. J.
East Lansing	Michigan Agricultural College	Frank S. Kedzie	Addison M. Brown.
Hillsdale	Hillsdale College	W. E. Ambler	Lorenzo E. Dow.
Holland	Hope College	Edward D. Dimnent	Gerrit J. Diekema.
Houghton	Michigan College of Mines	William Kelly	F. W. McNair.
Kalamazoo	Kalamazoo College	R. E. Olds, chairman.	C. W. Oakley.
Olivet	Olivet College	Theodore H. Wilson	Edward M. Wyble.
MINNESOTA.			
Collegeville	St. John's University	Peter Engel, O. S. B	Killan Held, O. S. B.
Minneapolis	Augsburg Seminary	Rev. E. F. Gynild	Fred Paulson.
Do	University of Minnesota	Fred B. Snyder	George H. Hayes.
Northfield	Carleton College	David P. Jones	Harlin W. Page.
Do	St. Olaf College	S. H. Holstad	O. O. Erling.
St. Paul	College of St. Catherine		
Do	College of St. Thomas		V. Rev. Jas. C. Byrne.
Do	Hamline University	Benjamin F. Nelson	Frank A. Cone.
Do	Macalester College	Thomas Shaw	B. H. Schriber.
St. Peter	Gustavus Adolphus College	Henry Benson	C. E. Benson.
Winona	College of St. Teresa	Mother M. Leo Tracy	Sister M. Anastasia Ryan.
MISSISSIPPI.			
Agricultural College	Mississippi Agricultural and Mechanical College.	Hon. Theodore G. Bilbo.	O. F. Lawrence.
Blue Mountain	Blue Mountain College	W. T. Lowrey	
Brookhaven	Whitworth Female College	Thad. B. Lampton	H. B. Watkins.
Clinton	Hillman College	W. T. Lowrey	Do.
Do	Mississippi College	W. T. Ratcliff	W. A. McComb.
Columbus	Industrial Institute and College.	Hon. Theodore G. Bilbo.	O. F. Lawrence.
Grenada	Grenada College	Judge J. G. McGowen.	Rev. R. A. Tucker.
Holly Springs	Rust University (colored)	John E. Anderson	F. H. Henry.
Jackson	Bellhaven College	W. C. Wells	C. A. Alexander.
Do	Millsaps College	W. B. Murrah	J. B. Streater.
Meridian	Meridian College (Conservatory).	L. P. Brown	T. C. Harmon.
Pontotoc	Chickasaw Female College		
University	University of Mississippi	Hon. Theodore G. Bilbo.	O. F. Lawrence.

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[1] Board of control.
[2] Board of overseers.
[3] The regents.

XXI.—PRESIDENTS AND SECRETARIES OF BOARDS OF TRUSTEES OF UNIVERSITIES AND COLLEGES—Continued.

Location.	University or college.	President of board of trustees.	Secretary of board of trustees.
MISSOURI.			
Albany	Palmer College	J. W. Piper	E. A. Watkins.
Cameron	Missouri Wesleyan College	W. F. Burris	Ben. F. Jones.
Canton	Culver-Stockton College	W. B. McRoberts	Ed. N. Cason.
Columbia	Christian College	D. A. Robnett	Mrs. L. W. St. Clair-Moss.
Do	Stephens College	W. W. Charters	J. E. Thornton.
Do	University of Missouri [1]	David R. Francis	J. G. Babb.
Fayette	Central College	John A. Rich	L. W. Jacobs.
Do	Howard Payne College	A. W. Walker	H. K. Givens.
Fulton	Westminster College	B. F. Edwards	B. H. Charles.
Do	Synodical College	A. D. Smith	S. G. Wood.
Do	William Woods College	W. E. Jameson, Chair.	J. H. Atkinson.
Glasgow	Pritchett College	M. L. Johnson	B. W. Heiman.
Lexington	Central College for Women	P. P. Lewis	E. N. Hopkins.
Liberty	William Jewell College	J. S. Major	
Marshall	Missuori Valley College	W. P. Stark	D. F. Manning.
Mexico	Hardin College	C. F. Clark	W. B. Sappington.
Morrisville	Searritt-Morrisville College	C. J. Wilkins	J. J. Orten.
Nevada	Cottey College	F. H. Glenn	J. M. Hall.
Parkville	Park College	Homer Mann	D. M. Knight.
St. Charles	Lindenwood College for Women	Dr. John L. Roemer	
St. Louis	Forest Park College	B. F. Edwards	M. Rhodes.
Do	St. Louis University	Bernard J. Otting, S. J.	Matthew McMenamy, S. J.
Do	Washington University [2]	Robert S. Brookings	Ludwig Kotany.
Springfield	Drury College	Thomas W. Nadal	G. W. Nonnemacher.
Tarkio	Tarkio College	A. L. Davidson	John P. Stevenson.
Warrenton	Central Wesleyan College	Franz Piehler	D. W. Smith.
MONTANA.			
Boseman	Montana College of Agriculture and Mechanic Arts.[3]	Hon. S. V. Stewart	May Trumper.
Butte	Montana State School of Mines	do	Do.
Missoula	State University	do	Do.
NEBRASKA.			
Bellevue	Bellevue College	C. M. Wilhelm	H. E. Maxwell.
Bethany	Cotner University	E. F. Snavely	John H. Bicknell.
College View	Union College	R. A. Underwood	H. A. Morrison.
Crete	Doane College	William A. Selleck	George W. Mitchell.
Grand Island	Grand Island College	Rev. A. J. Morris	Elias F. Starr.
Hastings	Hastings College	A. H. Jones	P. L. Johnson.
Lincoln	University of Nebraska [4]	Edward Provost Brown.	James S. Dales.
Omaha	Creighton University	F. X. McMenamy, S.J.	William P. Whelan, S. J.
Do	University of Omaha	Archie W. Carpenter	W. T. Graham.
University Place	Nebraska Wesleyan University	A. L. Johnson	N. A. Martin.
York	York College	W. O. Jones	R. E. Townsend.
NEVADA.			
Reno	University of Nevada [4]	J. F. Abel	Mrs. Louise Blaney.
NEW HAMPSHIRE.			
Durham	New Hampshire College of Agriculture and Mechanic Arts.	H. L. Boutwell	J. A. Tufts.
Hanover	Dartmouth College	Ernest Marion Hopkins.	John King Lord.
Manchester	St. Anxelm's College	Ernest Helmstetter, O. S. B.	Aloysius Bradley, O. S. B.
NEW JERSEY.			
Convent Station	College of St. Elizabeth	Sister Mary Pauline Kolligar.	Sister Mary Agnes Sharkey.
Hoboken	Stevens Institute of Technology	Alex. C. Humphreys	E. A. Stevens, jr.
Jersey City	St. Peter's College	James F. McDermott, S. J.	
Kenilworth	Upsala College	Mauritz Stolpe	J. E. Chester.
New Brunswick	Rutgers College	William H. S. Demarest.	J. Preston Searle.
Princeton	Princeton University	John G. Hibben [5]	Wilson Farrand.
South Orange	Seton Hall College	Right Rev. John J. O'Connor, D. D.	James J. Sheehan.

[1] Board of curators.

[2] Board of directors.

[3] State board of education has control.

[4] Board of regents.

[5] The governor of the State of New Jersey is ex officio president of the board of trustees.

—PRESIDENTS AND SECRETARIES OF BOARDS OF TRUSTEES OF UNIVERSITIES AND COLLEGES—Continued.

ocation.	University or college.	President of board of trustees.	Secretary of board of trustees.
W MEXICO.			
erque	University of New Mexico[1]	George L. Brooks	J. A. Reidy.
	New Mexico State School of Mines.[1]	P. H. Argall	C. T. Brown.
ollege	New Mexico College of Agriculture and Mechanic Arts.[1]	C. L. Hill	Louis A. McRae.
EW YORK.			
	New York State College for Teachers.	John H. Finley	Erastus Corning.
	Alfred University	Vernon A. Baggs	D. S. Burdick.
ale-on-Hud-	St. Stephen's College	David H. Greer, chairman.	William Harison.
	Wells College	N. Lansing Zabriskie	Robert L. Zabriskie.
n.	Adelphi College	James H. Post	H. K. Twitchell.
	Polytechnic Institute of Brooklyn.	Fred W. Atkinson	Richard L. Russell.
	St. Francis College	Right Rev. Mons. George Kaupert.	Brother Vincent, O. S. F.
	College of St. Francis Xavier	Rev. Joseph H. Rockwell, S. J.	Rev. Thomas E. Murphy, S. J.
	St. John's College	John W. Moore, C. M.	E. L. Carey, C. M.
	Canisius College	George J. Krim, S. J.	Frederic J. Bunse, S. J.
	University of Buffalo[2]	Charles P. Norton, chancellor.	Philip B. Goetz.
	St. Lawrence University	Vasco P. Abbott	Frank N. Cleaveland.
	Hamilton College	Elihu Root	George E. Dunham.
	Elmira College	H. C. Mandeville	Arthur Clinton.
	Hobart College	Douglas Merritt, chairman.	P. N. Nicholas.
on	Colgate University	Sidney M. Colgate	James C. Colgate.
	Cornell University	Hon. Frank N. Hiscock	Chas. D. Bostwick.
Park	Keuka College	W. T. Morris	Charles A. Dowdell.
ochelle	College of New Rochelle	Adrian Iselin, jr	Edward J. McGuire.
ork	Barnard College	Silas B. Brownell, chairman.	Frederic B. Jennings, clerk.
	College of the City of New York	John G. Milburn, chairman.	James W. Hyde.
	Columbia University	William Barclay Parsons.	John B. Pine.
	Fordham University	Joseph A. Mulry, S. J.	Joseph T. Keating, S. J.
	Hunter College of the City of York.	Edward J. McGuire, chairman.	Ernest C. Hunt.
	Manhattan College	Strother Henry August, F. S. C.	Brother Jasper, F. S. C.
	New York University	George Alexander	George A. Strong.
	Teachers College	V. Everit Macy	Dunlevy Milbank.
a University	Niagara University	William T. Lilly, C. M.	John J. O'Byrne, C. M.
m	Clarkson College of Technology	George H. Sweet	Hugh A. Grant.
eepsie	Vassar College	Charles M. Pratt, chairman.	Henry V. Pelton.
ter	University of Rochester	John P. Mumm	Charles M. Williams.
aventure	St. Bonaventure's College	Edward J. Blecke, O. F. M.	Alexander M. Hickey, O. F. M.
tady	Union University	George Alexander, D. D.	Edgar S. Barney.
se	Syracuse University	Charles Andrews	De Witt B. Thompson.
	Rensselaer Pyrotechnic Institute.	Palmer C. Ricketts	John Squires.
oint	U. S. Military Academy	None	None.
H CAROLINA.			
t	Belmont Abbey College	Right Rev. Leo Haid, O. S. B.	Thomas Oestreich, O. S. B.
Hill	University of North Carolina	Hon. T. W. Bickett	R. D. W. Connor.
te	Biddle University (colored)	R. P. Wyche	S. F. Wentz.
	Queens College	A. A. McGeachy	William Anderson.
on	Davidson College	W. L. Lingle	W. J. McKay.
n	Trinity College	Joseph G. Brown	D. W. Newsom.
ollege	Elon College	W. A. Harper	P. H. Fleming.
boro	Greensboro College for Women	J. B. Blades	Charles H. Ireland.
d College	Guilford College	J. Elwood Cox	David White.
y	Lenoir College	J. H. C. Huitt	E. J. Sox.
	Meredith College	W. N. Jones	J. D. Boushall.
	Peace Institute	William McC. White, chairman.	Mary Owen Graham.
	St. Mary's School	Joseph B. Cheshire	K. P. Battle, jr.
	Shaw University (colored)	W. S. Tanner	Albion H. Brainard.

[1] Board of regents.

[2] Council of the university.

XXI.—Presidents and Secretaries of Boards of Trustees of Universities and Colleges—Continued.

Location.	University or college.	President of board of trustees.	Secretary of board of trustees.
NORTH CAROLINA—continued.			
Red Springs	Flora Macdonald College	A. W. McLean	Dr. J. L. McMillan.
Salisbury	Livingstone College (colored)	J. W. Hood, D. D.	James E. Mason.
Wake Forest	Wake Forest College	James M. Parrott	Carey J. Hunter.
Weaverville	Weaver College	H. A. Dunham	C. E. Chambers.
West Raleigh	North Carolina State College of Agriculture and Engineering.	Hon. T. W. Bickett, ex officio.	C. W. Gold.
Wilson	Atlantic Christian College	George Hackney	S. G. Newborn.
Winston-Salem	Salem Academy and College	Edward Rondthaler	Howard E. Rondthaler.
NORTH DAKOTA.			
Agricultural College	North Dakota Agricultural College.[1]	Lewis F. Crawford	Charles E. Brewer.
Fargo	Fargo College	E. Lee Howard, D. D.	Edwin H. Stickney, D. D.
Jamestown	Jamestown College	H. M. Taber, chairman	S. E. Elsworth.
University	University of North Dakota[1]	Lewis F. Crawford	Charles E. Brewer.
Do	Wesley College	Frank Lynch	Thomas A. Gallagher.
OHIO.			
Ada	Ohio Northern University	S. A. Bowman	S. D. Hazlett.
Akron	The Municipal University of Akron.	Frank M. Cooke	C. R. Olin.
Alliance	Mount Union College	Walter M. Ellett	R. H. Carr.
Ashland	Ashland College	William Kolb, jr	R. R. Teeter.
Athens	Ohio University	Alston Ellis	Israel M. Foster.
Berea	Baldwin-Wallace College	Carl F. Strecker	Dayton C. Miller.
Bluffton	Bluffton College	J. F. Lehman	L. J. Lehman.
Cedarville	Cedarville College	William Conley	S. C. Wright.
Cincinnati	St. Xavier College	Rev. James McCabe, S. J.	Rev. George A. McGovern, S. J.
Do	University of Cincinnati	Rufus B. Smith	Daniel Laurence.
Cleveland	Case School of Applied Science	John M. Henderson	Eckstein Case.
Do	St. Ignatius College	William B. Sommerhauser, S. J.	Francis J. Haggeney.
Do	Western Reserve University	Charles F. Thwing	Wilfred G. Leutner, acting secretary.
Columbus	Capital University	C. F. W. Allwardt	L. H. Burry.
Do	Ohio State University	Benjamin F. McCann	Carl E. Steeb.
Dayton	St. Mary College	George Meyer, S. M	George N. Sauer, S. M.
Defiance	Defiance College	D. M. McCullough	Elizabeth F. Wells.
Delaware	Ohio Wesleyan University	David S. Gray	William G. Hormell.
Findlay	Findlay College	William Harris Guyer	A. O. Hamilton, financial secretary.
Gambier	Kenyon College	Bishop William A. Leonard.	Francis W. Blake.
Granville	Denison University	Charles T. Lewis	Millard Brelsford.
Hiram	Hiram College	Frederick A. Henry	James O. Newcomb.
Marietta	Marietta College	G. W. Hinman	W. W. Mills.
New Athens	Franklin College	W. H. McFarland	Lorain Johnson.
New Concord	Muskingum College	D. W. McClenahan, D. D.	W. J. Grimes.
Oberlin	Oberlin College	Henry C. King	George M. Jones.
Oxford	Miami University	Walter L. Tobey	Wallace P. Roudebush.
Do	Oxford College for Women	Eleanor N. Adams	William H. Stewart.
Do	Western College for Women	J. S. Crowell	Mrs. B. A. Richardson.
Painesville	Lake Erie College	James R. Garfield	Frank J. Jerome.
Rio Grande	Rio Grande College	Benner Jones	John M. Davis.
Springfield	Wittenberg College	N. S. Everhard	A. H. Smith.
Tiffin	Heidelberg University	George F. Barles	J. Calvin Royer.
Toledo	St. Johns University	Francis X. Busch, S. J.	William J. Engelen, S. J.
Do	Toledo University	William H. Tucker	J. Gazzam Mackenzie.
Westerville	Otterbein University	G. A. Lambert	E. L. Weinland.
Wilberforce	Wilberforce University (colored)	C. T. Shaffer	Carl C. Jenkins.
Wilmington	Wilmington College	David E. Dunham	Laurenna H. Farquhar.
Wooster	College of Wooster	John T. Stone	Judge R. L. Adair.
Yellow Springs	Antioch College	George D. Black, D.D., acting president.	J. Peery Miller.
OKLAHOMA.			
Chickasha	Oklahoma College for Women[2]	R. H. Wilson	Leslie T. Huffman.
Guthrie	Methodist University of Oklahoma.	William M. Short	W. R. Johnson.
Kingfisher	Kingfisher College	George L. Bowman	Charles W. Fisk.
Norman	University of Oklahoma[2]	R. H. Wilson	Leslie T. Huffman.
Stillwater	Oklahoma Agricultural and Mechanical College.[3]	F. M. Gault	N. H. Lingenfelter.
Tulsa	Henry Kendall College	E. Roger Kemp	Rev. L. C. Walter.

[1] Board of regents.

[2] State board of education has control.

[3] State board of agriculture has control.

XXI.—PRESIDENTS AND SECRETARIES OF BOARDS OF TRUSTEES OF UNIVERSITIES AND COLLEGES—Continued.

Location.	University or college.	President of board of trustees.	Secretary of board of trustees.
OREGON.			
lbany	Albany College	Frank J. Miller	William Fortmiller.
orvallis	Oregon Agricultural College	J. K. Weatherford	Jefferson Myers.
ugene	University of Oregon	R. S. Bean	L. H. Johnson.
orest Grove	Pacific University	Harrison G. Platt	Napoleon Davis.
Minnville	McMinnville College	B. F. Rhodes	Walter P. Dyke.
ewberg	Pacific College	Ezra H. Woodward	Evangeline Martin.
ortland	Reed College	Thomas L. Eliot	William P. Olds.
alem	Willamette University	B. L. Steeves	I. H. van Winkle.
PENNSYLVANIA.			
llentown	Allentown College for Women	Webster Grim	F. H. Moyer.
Do	Muhlenberg College	Reuben J. Butz	J. H. Waldelich.
nnville	Lebannon Valley College	A. S. Kreider	W. H. Weaver.
eatty	St. Vincent College	Leander Schnerr, O. S. B.	Gerard Bridge, O. S. B.
eaver	Beaver College	W. F. Connor	Robert Darragh.
eaver Falls	Geneva College	R. C. Wylie	E. K. Patton.
ethlehem	Lehigh University	Henry R. Price	Warren A. Wilbur.
Do	Moravian College and Theological Seminary.	Right Rev. Charles L. Moench.	Albert G. Rau.
Do	Moravian Seminary and College for Women.	Abraham S. Schropp	E. A. Rau.
yrn Mawr	Byrn Mawr College	Rufus M. Jones	Anna Rhoads Ladd.
rlisle	Dickinson College	E. W. Biddle	Charles W. Straw.
ambersburg	Wilson College	J. Ritchie Smith	Thomas J. Brereton.
ester	Pennsylvania Military College	John Wanamaker	Frank G. Sweeney.
llegeville	Ursinus College	H. E. Paisley	S. L. Messinger.
aston	Lafayette College	Israel P. Pardee	David Bennett King.
ettysburg	Pennsylvania College	John F. Dapp	H. C. Picking.
eenville	Thiel College	W. E. Frey	W. H. Shepfer.
rove City	Grove City College	F. R. Babcock	William S. McKay.
averford	Haverford College	Asa S. Wing	Morris E. Leeds.
untingdon	Juniata College	H. B. Brumbaugh	J. A. Myers.
ancaster	Franklin and Marshall College	B. F. Fackenthal, jr	George F. Mull.
ewisburg	Bucknell University	Harry S. Hopper	A. J. Rowland.
ncoln University	Lincoln University (colored)	John B. Rendall	William C. Robinson.
eadville	Allegheny College	Arthur W. Thompson	Paul Sturtevant.
echanicsburg	Irving Female College	A. R. Steck	Charles R. Trowbridge.
yerstown	Albright College	W. E. Detwiler	J. H. Shirey.
ew Wilmington	Westminister College	W. Charles Wallace, D. D.	W. T. Pierce.
iladelphia	Drexel Institute	Alexander van Rensselaer.	Herman Dercum.
Do	Dropsie College	Cyrus Adler	Ephraim Lederer.
Do	La Salle College	Rev. Brother Richard	Brother D. Aloysius F. S. C.
Do	Temple University	Russell H. Conwell	George A. Welsh.
Do	University of Pennsylvania	Edgar F. Smith	Edward Robins.
ttsburgh	Carnegie Institute of Technology.	William McConway, chairman.	W. Lucien Scaie.
Do	Duquesne University of the Holy Ghost.	Martin A. Hehir	John E. Kane.
Do	Pennsylvania College for Women.	Oliver McClintock	William H. Rea.
Do	University of Pittsburgh	George H. Clapp	Samuel B. Linhart.
linsgrove	Susquehanna University	Charles T. Aikens	R. L. Schroyer.
ate College	Pennsylvania State College	H. Walton Mitchell	Edwin E. Sparks.
arthmore	Swarthmore College	Robert M. Janney	Hetty L. Miller.
llanova	Villanova College	N. J. Vasey, O. S. A.	T. C. Middleton, O.S.A
ashington	Washington and Jefferson College.	John L. Dickey, vice president.	James I. Brownson.
aynesburg	Waynesburg College	Nathan B. Evans	J. W. Ray.
PORTO RICO.			
io Piedras	University of Porto Rico	Paul G. Miller	Henry B. Moore.
RHODE ISLAND.			
ingston	Rhode Island State College	Walter E. Ranger	Robert S. Burlingame.
ovidence	Brown University	William H. P. Faunce.	Thomas D. Anderson.
SOUTH CAROLINA.			
arleston	College of Charleston	Harrison Randolph	J. C. Ball.
Do	The Citadel, The Military College of South Carolina.	Col. O. J. Bond, Supt.	

XXI.—Presidents and Secretaries of Boards of Trustees of Universities and Colleges—Continued.

Location.	University or college.	President of board of trustees.	Secretary of board of trustees.
SOUTH CAROLINA—con.			
Clemson College	Clemson Agricultural College	Alan Johnstone	Samuel W. Evans.
Clinton	Presbyterian College of South Carolina.	Alexander Martin	A. E. Spencer.
College Place	Columbia College	E. O. Watson	A. N. Brunson.
Columbia	Allen University (colored)	Bishop W. D. Chappelle.	Greene Jackson.
Do	Benedict College (colored)	William H. Lyles	B. W. Valentine.
Do	University of South Carolina	Gov. Richard I. Manning.	Sarah F. Fickling.
Due West	Erskine College	G. R. White, D. D	G. G. Parkinson, D. D.
Do	Woman's College of Due West	A. S. Kennedy	E. L. Reid.
Greenville	Chicora College	J. P. Marion	S. C. Byrd.
Do	Furman University	J. J. Lawton	A. G. Furman.
Do	Greenville Woman's College	T. T. Hyde	B. F. Martin.
Greenwood	Lander College	George W. Sullivan	M. W. Hook.
Hartsville	Coker College	James L. Coker	J. J. Lawton.
Newberry	Newberry College	George B. Cromer	J. B. Hunter.
Spartanburg	Converse College	J. B. Cleveland	H. L. Bomar.
Do	Wofford College	J. Lyles Glenn	James W. Kilgo.
SOUTH DAKOTA.			
Brookings	South Dakota State College of Agricultural and Mechanic Arts.[1]	T. W. Dwight	Irwin L. Aldrich.
Huron	Huron College	H. M. Gage	J. I. Pasek, business manager.
Mitchell	Dakota Wesleyan University	S. E. Morris	Lewis Shuster.
Rapid City	State School of Mines	T. W. Dwight	I. D. Aldrich.
Sioux Falls	Sioux Falls College	S. P. Shaw	A. E. Godfrey.
Vermilion	University of South Dakota	T. W. Dwight	I. D. Aldrich.
Yankton	Yankton College	H. K. Warren	M. A. Stewart, acting secretary.
TENNESSEE.			
Bristol	King College	John H. Caldwell	Tilden Scherer.
Do	Sullins College	A. D. Reynolds	T. F. Staley.
Chattanooga	University of Chattanooga	T. S. Henderson	Herman Ferger.
Clarksville	Southwestern Presbyterian University.	Charles E. Diehl	M. Savage.
Greeneville	Tusculum College	Henry R. Brown	E. J. Baxter.
Harrogate	Lincoln Memorial University	F. A. Seiberling	J. H. S. Morison.
Jackson	Memphis Conference Female Institute.	J. W. Blackard	Alva W. Taylor.
Do	Union University	O. C. Barton	A. M. Alexander.
Jefferson City	Carson-Newman College	J. Pike Powers	J. N. Ellis.
Knoxville	Knoxville College (colored)	D. A. McClenahan	R. W. McGranahan.
Do	The University of Tennessee	Brown Ayres	William Rule.
Lebanon	Cumberland University	A. B. Martin	A. W. Hooker.
McKenzie	Bethel College	D. M. McAnulty	J. W. Smith.
Maryville	Maryville College	Edgar A. Elmore	Fred. L. Proffitt.
Memphis	Christian Brothers College	Brother John, F. S. C.	Brother Hilarion, F. S. C.
Milligan	Milligan College	C. C. Taylor	Walter Price.
Murfreesboro	Tennessee College	C. H. Byrn	John Williams.
Nashville	Boscobel College	W. M. Lunsford	William Hume.
Do	Fisk University (colored)	L. Hollingsworth Wood, vice chairman.	Dr. Thomas Jesse Jones.
Do	Peabody College for Teachers	Edward T. Sanford, chairman.	Charles E. Little.
Do	Vanderbilt University	Whitefoord R. Cole	Claude Waller.
Sewanee	University of the South	Bishop T. F. Gailor	James G. Glass.
Spencer	Burritt College	W. S. Graves	J. Logan Malloy.
Washington College	Washington College	James T. Cooter	J. W. Whitlock.
TEXAS.			
Abilene	Simmons College	George L. Paxton	D. H. Mansell, bursar.
Austin	University of Texas[1]	F. W. Cook	E. J. Matthews.
Belton	Baylor Female College	A. J. Jarrell	Rev. S. E. Tull.
Brownwood	Daniel Baker College	A. F. Carr, D. D	Brooke Smith.
Do	Howard Payne College	T. C. Yantis	J. L. King.
College Station	Agricultural and Mechanical College of Texas.	John I. Guion	S. G. Bailey.
Dallas	Southern Methodist University	Bishop E. D. Mouzon	Frank Reedy.
Fort Worth	Texas Christian University	S. J. McFarland	E. M. Waits.
Do	Texas Woman's College	Ocie Speer	P. G. Dedmon.

[1] Board of regents.

ESIDENTS AND SECRETARIES OF BOARDS OF TRUSTEES OF UNIVERSITIES AND COLLEGES—Continued.

on.	University or college.	President of board of trustees.	Secretary of board of trustees.
tinued.			
	Southwestern University	W. L. Dean	Rev. R. G. Mood.
	Rice Institute	James A. Baker	Benjamin B. Rice.
	St. Louis College	James P. Canning	John F. Ryan.
	Austin College	A. L. Randell	William F. Galbraith.
	North Texas Female College	John Marshall	P. C. Archer.
	Westminster College	W. M. Moody	J. A. Miller.
	Baylor University	Pat M. Neff	W. H. Jenkins.
	Trinity University	F. N. Drane	H. L. Williamson.
H.			
	Agricultural College of Utah	Lorenzo N. Stohl	John L. Coburn.
ty	University of Utah[1]	W. W. Riter	E. D. Thomas.
NT.			
	University of Vermont and State Agricultural College.	George H. Perkins, acting president.	Guy W. Bailey.
	Middlebury College	John M. Thomas	John A. Fletcher.
	Norwich University	H. R. Roberts, acting president.	Henry W. Orser.
	St. Michael's College	E. M. Salmon, S. S. E.	E. Alliot, S. S. E.
IA.			
	Martha Washington College	M. H. Honaker	L. T. Cosby.
	Stonewall Jackson College	J. A. Buchanan	J. R. Dobyns.
	Randolph-Macon College	E. D. Newman	S. C. Hatcher.
	Virginia Agricultural and Mechanical College and Polytechnic Institute.	J. Thompson Brown, rector of board of visitors.	Charles I. Wade.
	Bridgewater College	Hiram G. Miller	Sidney L. Bowman.
	Virginia Intermont College	John R. Dickey	S. C. Hodges.
lle	University of Virginia	R. Tate Irvine, rector of board of visitors.	E. I. Carruthers, bursar.
	Averett (Junior) College for Young Women.	H. L. Boatwright	D. B. Gardner.
	Emory and Henry College	M. H. Honaker	G. E. Penn.
dney	Hampden-Sidney College	Paulus A. Irving	F. T. McFaden.
	Hollins College	Lucian H. Cocke	M. Estes Cocke.
	Virginia Military Institute	R. A. James	L. E. Steele.
	Washington and Lee University.	William A. Anderson, rector.	Paul M. Penick.
	Randolph-Macon Woman's College.	E. D. Newman	S. C. Hatcher.
	Virginia Christian College	T. G. Hobbs	W. G. Shackelford.
	Eastern College	Hervin U. Roop	Thomas H. Lion.
	Richmond College	J. Taylor Ellyson	B. West Tabb.
	Virginia Union University (colored).	A. Binga, jr., D. D.	William C. James.
	Virginia College (Junior) for Young Women.	Mattie P. Harris	
	Elizabeth College	R. W. Kime	Charles K. Hunton.
	Roanoke College	Rev. A. D. R. Hancher, vice president.	Robert W. Kime.
	Sweet Briar College	Carl C. Grammer	Arthur P. Gray.
g	College of William and Mary	Dr. James H. Dillard	L. W. Lane, jr.
GTON.			
	State College of Washington[1]	Edwin T. Coman	E. O. Holland.
	University of Washington[1]	William T. Perkins	William Markham.
	Gonzaga University	James M. Brogan, S. J.	Paul P. Sauer, S. J.
	Spokane College	Rev. A. M. Skinlov	P. O. Floan.
	Whitworth College	Jay P. Graves	R. E. Porterfield.
	College of Puget Sound	E. L. Blaine	Dix H. Rowland.
	Whitman College[2]	Hon. Miles C. Moore	Dorsey M. Hill.
GINIA.			
	Bethany College	Thomas E. Cramblet	M. V. Danford.
	West Virginia Wesleyan College.	Charles W. Lynch	John A. Barnes.
	Davis and Elkins College	Howard Sutherland	Frederick H. Barron.
	West Virginia University	M. P. Shawkey	J. F. Marsh.

[1] Board of regents.

[2] Board of overseers.

XXI.—PRESIDENTS AND SECRETARIES OF BOARDS OF TRUSTEES OF UNIVERSITIES AND COLLEGES—Continued.

Location.	University or college.	President of board of trustees.	Secretary of board of trustees.
WISCONSIN.			
Appleton	Lawrence College	L. M. Alexander	**Herman Saecker.**
Beloit	Beloit College	Melvin A. Brannon	**Edward B. Kilbourn.**
Madison	University of Wisconsin [1]	Charles H. Vilas	**M. E. McCaffrey.**
Milton	Milton College	Fred C. Dunn	**Allen B. West.**
Milwaukee	Concordia College	Rev. Ed. Albrecht	**B. Sievers.**
Do	Marquette University	Herbert C. Noonan, S. J.	**James D. Foley, S. J.**
Do	Milwaukee-Downer College	W. W. Wight	**Charles H. Palmer.**
Plymouth	Mission House	D. Hagelskamp	**E. A. Hofer.**
Prairie du Chien	Campion College	Albert C. Fox	**James J. Daly.**
Ripon	Ripon College	Henry C. Culbertson	**Samuel M. Pedrick.**
Sinsinawa	St. Clara College and Academy	Mother M. Samuel	**Sister M. Constantia.**
Watertown	Northwestern College	Rev. Jul. Klingmann	**H. Machmueller.**
Waukesha	Carroll College	William W. Perry	**Henry M. Youmans.**
WYOMING.			
Laramie	University of Wyoming	Mrs. Mary B. David	**F. S. Burrage.**

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[1] Board of regents.

XXII.—PRESIDENTS OR DEANS OF PROFESSIONAL SCHOOLS.

1. SCHOOLS OF THEOLOGY.

Location.	Name of institution.	President or dean.
St. Bernard, Ala	St. Bernard College and Abbey (R. C.)	**Bernard Menges, D. D., O. S. B.**
Selma, Ala	Payne University Theological Department (A. M. E.).	**Robert Ernest Brooks, D. D.**
Talladega, Ala	Talladega College Theological Seminary (Cong.)	**Frank S. Brewer, B. A.**
Tuscaloosa, Ala	Stillman Institute (colored) (Presb.)	**Rev. R. K. Timmons.**
Argenta, Ark	Shorter College Theological Department (A. M. E.).	**J. N. Campbell, B. D.**
Little Rock, Ark	Arkansas Baptist College School of Theology	**Joseph A. Booker, D. D.**
Do	St. John's Diocesan Seminary (R. C.)	**Winand H. Aretz, S. T. D.**
Berkeley, Cal	Berkeley Baptist Divinity School	**Claiborne M. Hill, D. D.**
Do	Pacific School of Religion (undenominational)	**Charles Sumner Nash, D. D**
Do	Pacific Unitarian School for the Ministry	**Earl Morse Wilbur, D. D.**
Los Angeles, Cal	University of Southern California, Maclay College of Theology (M. E.).	**Ezra A. Healy, S. T. D.**
Menlo Park, Cal	St. Patrick's Seminary (R. C.)	**Henry A. Ayrinhac, S. S.**
San Anselmo, Cal	San Francisco Theological Seminary (Presb.)	**Warren Hall Landon, D. D.**
San Francisco, Cal	California Bible College (Disc.)	**Dennison A. Russell, D. D.**
Do	Church Divinity School of the Pacific (P. E.)	**William F. Nichols, D. D.**
Denver, Colo	Iliff School of Theology (M. E.)	**James A. Beebe, D. D.**
Hartford, Conn	Hartford Seminary Foundation (Cong.)	**William Douglas Mackenzie, D. D., LL. D.**
Middletown, Conn	Berkeley Divinity School (P. E.)	**William Palmer Ladd, B. D., dean.**
New Haven, Conn	Yale University School of Religion (nonsectarian).	**Charles Reynolds Brown, D. D.**
Washington, D. C	Catholic University of America, School of Sacred Sciences (R. C.).	**Edmund T. Shanahan, D. D.**
Do	Howard University Theological Department (colored) (interdenominational).	**Davie Butler Pratt, D. D.**
St. Leo, Fla	St. Leo College and Abbey (R. C.)	**Charles H. Mohr, O. S. B., D. D.**
Atlanta, Ga	Atlanta Theological Seminary (Cong.)	**E. Lyman Hood, Ph. D.**
Do	Emory University, Candler School of Theology (M. E. Church South).	**Plato T. Durham, D. D.**
Do	Gammon Theological Seminary (colored) (M. E.)	**Philip M. Watters, D. D**
Do	Morehouse College Divinity School (colored) (Bapt.)	**C. C. Smith, D. D.**
Do	Morris Brown University, Turner Theological Seminary (A. M. E.).	**P. W. Greatherat, D. D.**
Aurora, Ill	Aurora College Biblical Department (Advent Chris.).	**Orrin R. Jenks, D. B.**
Bourbonnais, Ill	S. Viator College Theological Seminary (R. C.)	**J. P. O'Mahoney, C. S. V.**
Chicago, Ill	Bethany Bible School	**Albert C. Wieand, D. D.**
Do	Chicago Theological Seminary (Cong.)	**Ozora Stearns Davis, D. D.**
Chicago (Maywood), Ill.	Evangelical Lutheran Theological Seminary at Chicago.	**Elmer F. Krauss, D. D.**
Chicago, Ill	McCormick Theological Seminary (Presb.)	**James G. K. McClure, D. D., LL. D.**
Do	University of Chicago Divinity School (Bapt.)	**Shailer Mathews, D. D.**
Do	Western Theological Seminary (P. E.)	**William C. De Witt, S. T. D.**

XXII.—PRESIDENTS OR DEANS OF PROFESSIONAL SCHOOLS—Continued.

1. SCHOOLS OF THEOLOGY—Continued.

Location.	Name of institution.	President or dean.
Evanston, Ill	Garrett Biblical Institute, Northwestern University (M. E.).	Charles M. Stuart, D. D., LL. D.
Do	Norwegian-Danish Theological Seminary, Northwestern University (M. E.).	Nels E. Simonsen, D. D.
Do	Swedish Theological Seminary, Northwestern University (M. E.).	Rev. Carl G. Wallenius.
Greenville, Il	Greenville College, Department of Theology (Free Meth.).	John La Due, A. M.
Naperville, Ill	Evangelical Theological Seminary (Ev. Asso.)	S. J. Gamertsfelder, D. D.
Rock Island, Il	Augustana College and Theological Seminary (Ev. Luth.).	Gustav Andreen, D. D., R. N. O., K. V. O.
Springfield, Ill	Concordia Theological Seminary (Ev. Luth. Synod of Missouri, Ohio, and other States).	Rev. R. D. Biedermann.
Merom, Ind	Union Christian College Biblical Department (Chris.).	Charles B. Hershey, D. D.
St. Meinrad, Ind	St. Meinrad Seminary (Ecclesiastic) (R. C.)	Very Rev. Albert Kleber, O. S. B., rector.
Upland, Ind	Reade Theological Seminary, Theological Department of Taylor University.	Newton Wray, B. D., D. D.
Des Moines, Iowa	Drake University College of the Bible (Chris.)	Jesse C. Caldwell, B. D., LL. D.
Do	Grand View College Theological School (Luth.)	Carl P. Höjbjerg, president.
Dubuque, Iowa	Dubuque College and Seminary (Presb.)	Cornelius M. Steffens, D. D.
Do	Wartburg Theological Seminary (Ev. Luth.)	M. Fritschel, D. D.
Atchison, Kans	Western Theological Seminary of Ev. Luth. Church, Midland College.	Holmes Dysinger, D. D., LL. D.
Kansas City, Kans	Kansas City Baptist Theological Seminary	Philip W. Crannell, D. D.
Do	Kansas City University College of Theology (Meth. Prot.).	Herbert T. Stephens, D. D.
Topeka, Kans	Kansas Theological School	James Wise, S. T. D.
Kingswood, Ky	Department of Theology, Christian Ethics and Metaphysics, Kingswood College.	Rev. W. B. Dunkum.
Lexington, Ky	College of the Bible, Transylvania College (Chris.)	Richard H. Crossfield, LL. D.
Louisville, Ky	Presbyterian Theological Seminary of Kentucky	Charles R. Hemphill, D. D., LL. D.
Do	Southern Baptist Theological Seminary	Edgar Y. Mullins, D. D., LL. D.
Do	State University Theological Department (colored) (Bapt.).	Marshall B. Lanier, B. D.
Bangor, Me	Bangor Theological Seminary (Cong.)	David N. Beach, D. D.
Baltimore, Md	St. Mary's Seminary (R. C.)	E. R. Dyer, S. S., D. D.
Emmitsburg, Md	Mount St. Mary College, Ecclesiastical Seminary (R. C.).	B. J. Bradley, LL. D.
Westminster, Md	Westminster Theological Seminary (Meth. Prot.)	Hugh Latimer Elderdice, D. D.
Woodstock, Md	Woodstock College (R. C.)	Joseph F. Hanselman, S. J.
Boston, Mass	Boston University School of Theology (M. E.)	L. J. Birney, D. D.
Boston (Brighton), Mass.	St. John's Boston Ecclesiastical Seminary (R. C.).	John B. Peterson, Ph. D.
Cambridge, Mass	Andover Theological Seminary (Cong.)	
Do	Episcopal Theological School	George Hodges, D. D., D. C. L., LL. D.
Do	Harvard University Divinity School (Nonsect.)	William Wallace Fenn, D. D.
Do	New-Church Theological School (Ch. of N. Jeru.)	Rev. William L. Worcester.
Newton Centre, Mass	Newton Theological Institution (Bapt.)	George Edwin Horr, D. D., LL. D.
Tufts College, Mass	Tufts College, Crane Theological School (Univ.)	Lee S. McCollester, D. D.
Grand Rapids, Mich	Theological School and Calvin College (Chris. Ref. Ch.).	Professor Samuel Volbeda, rector.
Holland, Mich	Western Theological Seminary (Ref. Ch. in Amer.).	James F. Zwemer, D. D.
Hancock, Mich	Suomi College Theological Seminary (Finnish Ev. Luth.).	John K. Nikander, D. D.
Owosso, Mich	Bible Holiness Seminary School of Theology	Rev. C. G. Taylor.
Collegeville, Minn	St. John's University Ecclesiastical Seminary (R. C.).	Rt. Rev. Peter Engel, O. S. B.
Faribault, Minn	Seabury Divinity School (P. E.)	Frederick F. Kramer, Ph. D., D. D.
Minneapolis, Minn	Augsburg Seminary (Ev. Luth.)	George Sverdrup, M. A.
St. Paul, Minn	Bethel Theological Seminary (Bapt.)	G. Arvid Hagstrom, D. D.
Do	Luther Seminary	H. Ernst, D. D.
Do	Evangelical Norwegian Lutheran Seminary	Johs. Ylvisaker.
Do	St. Paul Theological Seminary (R. C.)	Francis J. Schaefer, D. D.
St. Paul (St. Anthony Park), Minn.	Luther Theological Seminary	Marcus Olaus Böckman, D. D.
Columbia, Mo	Bible College of Missouri	Rev. Granville D. Edwards.
Canton, Mo	School of Religion in Culver-Stockton College	Henry B. Robison, Ph. D.
St. Louis, Mo	Concordia Theological Seminary (Ev. Luth.)	Francis Pieper, D. D.
Do	Eden Theological Seminary of the Evangelical Church of North America.	William Becker.
Do	St. Louis University School of Divinity (R. C.)	Francis J. O'Boyle, S. J.

XXII.—PRESIDENTS OR DEANS OF PROFESSIONAL SCHOOLS—Continued.

1. SCHOOLS OF THEOLOGY—Continued.

Location.	Name of institution.	President or dean.
Warrenton, Mo	Central Wesleyan College German Theological Seminary (M. E.).	E. S. Havighurst, D. D.
Webster Groves	Kenrick Theological Seminary (R. C.)	M. S. Ryan, C. M., D. D.
Blair, Nebr	Dana College, Trinity Seminary (Ev. Luth.)	Rev. L. A. Laursen.
Omaha, Nebr	Presbyterian Theological Seminary	Albert B. Marshall, D. D., LL. D.
Bloomfield, N. J	Bloomfield Theological Seminary (Presb.)	Henry J. Weber, Ph. D., D. D., dean.
Madison, N. J	Drew Theological Seminary (M. E.)	Ezra Squier Tipple, D. D.
New Brunswick, N. J.	Theological Seminary of the Reformed Church in America.	J. Preston Searle, D. D.
Princeton, N. J	Princeton Theological Seminary of the Presbyterian Church.	J. Ross Stevenson, D. D., LL. D.
South Orange, N. J	Diocesan Seminary of the Immaculate Conception, Seton Hall College (R. C.).	Mgr. James F. Mooney.
Alfred, N. Y	School of Religion at Alfred University (7th Day Bapt.).	Arthur E. Main, D. D.
Auburn, N. Y	Auburn Theological Seminary (Presb.)	George B. Stewart, D. D., LL. D.
Brooklyn, N. Y	St. John's College Diocesan Theological Seminary (R. C.).	E. L. Carey, C. M.
Buffalo, N. Y	German Martin Luther Seminary	Rudolph Grabau.
Canton, N. Y	Canton Theological School of St. Lawrence University (Univ.).	John Murray Atwood, D. D.
Esopus, N. Y	Mount St. Alphonsus Theological Seminary, Redemptorist College (R. C.).	Florian J. Reichert, C. SS. R.
Geneva, N Y	De Lancy Divinity School (P. E.)	
Hamilton, N. Y	Theological Seminary, Colgate University (Nonsect.).	John F. Vichert, D. D., dean.
Hartwick Seminary, N. Y.	Hartwick Seminary (Ev. Luth.)	Alfred Hiller, D. D., chairman.
Houghton, N. Y	Houghton Wesleyan Methodist Theological Seminary.	James S. Luckey, president.
New York (City), N. Y.	Bible Teachers' Training School (Interdenominational).	William Hoge Marquess, D. D., LL. D., dean.
Do	General Theological Seminary of the Protestant Episcopal Church.	Hughell E. W. Fosbroke, D. D.
Do	Jewish Theological Seminary of America	Cyrus Adler, Ph. D., acting president.
Do	Union Theological Seminary (Interdenominational).	Arthur C. McGiffert, D. D., LL. D., president.
Niagara University, N. Y.	Niagara University Seminary of Our Lady of Angels (R. C.).	William T. Likly, C. M.
North Chili, N. Y	A. M. Chesbrough Seminary (Chris.)	William Hoffman, principal.
Rochester, N. Y	Rochester Theological Seminary (Bapt.)	Clarence A. Barbour, D. D.
Do	St. Bernard's Theological Seminary (R. C.)	James J. Hartley, D. D., prorector.
St. Bonaventure, N. Y.	St. Bonaventure Seminary and College (R. C.)	Alexander M. Hickey, O. F. M.
Yonkers, N. Y	St. Joseph's Seminary, Cathedral College (R. C.)	John P. Chidwick, D. D.
Ayden, N. C	Ayden Seminary (Free Will Bapt.)	J. E. Sawyer, A. B.
Belmont, N. C	Belmont Abbey Seminary (R. C.)	Rt. Rev. Leo Haid, O. S. B., D. D.
Charlotte, N. C	Biddle University School of Theology (colored) (Presb.)	H. L. McCrorey, D. D.
Raleigh, N. C	Shaw University Theological School (colored) (Bapt.)	Nicholas F. Roberts, D. D., dean.
Salisbury, N. C	Hood Theological Seminary of Livingstone College (A. M. E. Z.).	William O. Carrington, D. D.
Ashland, Ohio	Ashland College, Theological Seminary (Brethren).	J. Allen Miller, D. D.
Berea, Ohio	Baldwin-Wallace College, Nast Theological Seminary (M. E.).	Frederic Cramer, D. D.
Carthagena, Ohio	St. Charles Theological Seminary (R. C.)	Boniface Russ, C. PP. S.
Cincinnati, Ohio	Hebrew Union College	Kaufmann Kohler, Ph. D.
Do	Lane Theological Seminary (Presb.)	William McKibbin, D. D., LL. D.
Cincinnati (Mt. Washington Station, 1).	Mount St. Mary's Seminary of the West (R. C.)	Very Rev. Frank J. L. Beckman, S. T. D.
Cleveland, Ohio	St. Mary's Theological Seminary (R. C.)	Very Rev. James A. McFadden, rector.
Columbus, Ohio	Evangelical Lutheran Theological Seminary, Capital University.	F. W. Stellhorn, D. D.
Dayton, Ohio	Bonebrake Theological Seminary (U. Breth.)	Josiah P. Landis, Ph. D., D. D.
Do	Central Theological Seminary of the Reformed Church in the United States.	Henry J. Christman, D. D.
Findlay, Ohio	Findlay College, Department of Theology (Church of God).	William Harris Guyer, D. D., president.
Gambier, Ohio	Kenyon College Divinity School (P. E.)	George F. Smythe, D. D.
Oberlin, Ohio	Graduate School of Theology of Oberlin College (Nonsect.).	Edward Increase Bosworth, D. D.; George Walter Fiske, D. B.

XXII.—PRESIDENTS OR DEANS OF PROFESSIONAL SCHOOLS—Continued.

1. SCHOOLS OF THEOLOGY—Continued.

Location.	Name of institution.	President or dean.
pringfield, Ohio	Wittenberg College, Hamma Divinity School (Ev. Luth.).	David H. Bauslin.
Wilberforce, Ohio	Wilberforce University, Payne Theological Seminary (A. M. E.).	George F. Woodson, D. D.
Xenia, Ohio	United Presbyterian Theological Seminary	Joseph Kyle, D. D., LL. D.
Eugene, Oreg	Eugene Bible University (Chris. or Disc.)	Eugene C. Sanderson, D. D.
Salem, Oreg	Kimball School of Theology	Henry J. Talbott, D. D.
Beatty, Pa	St. Vincent's Seminary (R. C.)	Leander Schnerr, O. S. B., president.
Bethelhem, Pa	Moravian College Theological Seminary	J. Taylor Hamilton, D. D.
Chester, Pa	Crozer Theological Seminary (Bapt.)	Milton G. Evans, D. D., LL. D.
Gettysburg, Pa	Theological Seminary of the General Synod of Ev. Luth. Church in United States.	J. A. Singmaster, D. D.
Lancaster, Pa	Theological Seminary of the Reformed Church in the United States.	John C. Bowman, D. D.
Lincoln University, Pa.	Lincoln University Theological Department (Presb.).	J. B. Rendall, D. D.
Meadville, Pa	Meadville Theological School (Unita.)	Franklin C. Southworth, D. D., LL. D.
Overbrook, Pa	St. Charles Borromeo Seminary (R. C.)	Rt. Rev. Mgr. Henry T. Drumgoole, D. D., rector.
Philadelphia (Mount Airy), Pa.	Lutheran Thelogical Seminary at Philadelphia	Henry Eyster Jacobs, D. D.
Philadelphia, Pa	Divinity School of the Protestant Episcopal Church	George G. Bartlett, S. T. B.
Philadelphia (Germantown), Pa.	St. Vincent Seminary (R. C.)	Frederick J. Maune, C. M.
Philadelphia, Pa	Temple University Theological School (Nonsect.)	Walter B. Shumway, D. D.
Pittsburgh, Pa	Pittsburgh Theological Seminary (United Presb.).	John McNaugher, D. D., LL. D.
Do	Reformed Presbyterian Theological Seminary	Richard Cameron Wylie, D. D., LL. D.
Do	Western Theological Seminary (Presb.)	James A. Kelso, Ph. D., D.D.
Selinsgrove, Pa	Susquehanna University School of Theology (Ev. Luth.).	Franklin P. Manhart, D. D. dean.
Villanova, Pa	Villanova College, Augustinian Scholastic Department (R. C.).	Joseph A. Hickey, O. S. A., J.C. D., regent of studies.
Columbia, S. C	Allen University, Dickerson Theological Seminary (A. M. E.).	I. H. Alston, B. D.
Do	Columbia Theological Seminary (Presb.)	Thornton Whaling, D. D.
Do	Lutheran Theological Seminary of the United Synod.	Andrew G. Voigt, D. D., LL. D.
Due West, S. C	Erskine Theological Seminary (A. R. Presb.)	F. Y. Pressly, D. D.
Jackson, Tenn	Lane College Theological School (Colo. M. E.)	J. F. Lane, Ph. D.
Kimberlin Heights, Tenn.	Johnson Bible College	Ashley Sidney Johnson, LL. D.
Knoxville, Tenn	Knoxville College Theological School (colored) (Un. Presb.).	R. W. McGranahan, D. D.
Nashville, Tenn	Vanderbilt University School of Religion (nonsectarian).	Wilbur F. Tillett, D. D.
Sewanee, Tenn	University of the South Theological Department (P. E.)	Cleveland Keith Benedict, D. D.
Austin, Tex	Austin Presbyterian Theological Seminary	Thomas W. Currie, B. D., chairman of faculty.
Dallas, Tex	School of Theology, Southern Methodist University	Hoyt M. Dobbs, D. D.
Fort Worth, Tex	Southwestern Baptist Theological Seminary	Benajah H. Carroll, D. D., LL. D.
Do	Brite College of the Bible, Texas Christian University.	Colby D. Hall, A. M.
Marshall, Tex	Bishop College Theological Department (colored) (Bapt.).	Charles H. Maxson, B. DI.
Peniel, Tex	Peniel College Department of Theology (Nazarine).	Prof. Charles A. McConnell.
Seguin, Tex	Guadalupe College, Department of Theology (colored) (Bapt.).	
Tyler, Tex	Texas College, Theological Department (colored M. E.).	Rev. D. C. Fowler, theological teacher.
Waco, Tex	Paul Quinn College, Department of Theology (A. M. E.).	
Bridgewater, Va	Bridgewater College Bible Department (Breth.)	John S. Flory, Ph. D.
Lynchburg, Va	Virginia Theological Seminary and College (Bapt.).	Robert C. Woods, D. D.
Petersburg, Va	Bishop Payne Divinity School (P. E.)	C. B. Bryan, D. D.
Richmond, Va	Union Theological Seminary in Virginia (Presb.).	Walter W. Moore, D. D., LL. D.
Do	Virginia Union University Theological Department (colored) (Bapt.).	George Rice Hovey, D. D.
Theological Seminary, Va.	Theological Seminary of the Protestant Episcopal Church in Virginia.	Berryman Green, D. D.
Bethany, W. Va	Bethany College, Department of Ministerial Education.	H. L. Calhoun, Ph. D.
Nashotah, Wis	Nashotah House (Episcopal)	Edward A. Larrabee, D. D.

XXII.—PRESIDENTS OR DEANS OF PROFESSIONAL SCHOOLS—Continued.

1. SCHOOLS OF THEOLOGY—Continued.

Location.	Name of institution.	President or dean.
Oconomowoc, Wis	**College of the Immaculate Conception Theological School (R. C.).**	**Thomas P. Brown, C. SS. R., rector.**
Plymouth, Wis	**The Mission House of the Reformed Church**	**E. A. Hofer, D. D.**
St. Francis, Wis	**Provincial Seminary of St. Francis de Sales (R.C.).**	**Joseph Rainer, V. G.**
Wauwatosa, Wis	**Evangelical Lutheran Theological Seminary**	**John Schaller.**

2. SCHOOLS OF LAW.

University, Ala	University of Alabama, Law Department	Albert J. Farrah, LL. B.
Tucson, Ariz	University of Arizona, Department of Law	Samuel Marks Fegtly, LL.B., professor.
Little Rock, Ark	Arkansas Law School	John H. Carmichael, LL. B.
Berkeley, Cal	University of California School of Jurisprudence	William Carey Jones, M. A.
Los Angeles, Cal	University of Southern California College of Law	Frank M. Porter, LL. M.
Do	Southwestern University, School of Law	Arthur J. Abbott, J. D.
San Francisco, Cal	Hastings College of Law, University of California	Edward R. Taylor, M. D.
Do	Law Department of St. Ignatius University	Matt. I. Sullivan, LL. D.
Do	San Francisco Law School	James A. Ballentine, A. B.
Do	San Francisco Young Men's Christian Association Law School.	J. E. White, acting dean.
Santa Clara, Cal	University of Santa Clara Institute of Law	James H. Campbell, Ph. D.
Stanford University, Cal.	Leland Stanford Junior University, Law School	Charles A. Huston, J. D. S. J. D.
Boulder, Colo	University of Colorado, School of Law	John D. Fleming, LL. D.
Denver, Colo	University of Denver Law School	George C. Manly, LL. B.
New Haven, Conn	Yale University Law School	Thomas Walter Swan, LL.B.
Washington, D. C	Catholic University of America School of Law	Thomas C. Carrigan, Ph. D., LL. D.
Do	Georgetown University School of Law	George E. Hamilton, LL. D.
Do	George Washington University Law School	Merton Le Roy Ferson, acting dean.
Do	Howard University School of Law (colored)	Benjamin F. Leighton, LL.D.
Do	National University Law School	Charles F. Carusi, LL. M.
Do	Washington College of Law	Emma M. Gillett, LL. M.
Deland, Fla	John B. Stetson University College of Law	Richard A. Rasco, LL. B.
Gainesville, Fla	University of Florida College of Law	Harry R. Trusler, LL. B.
Athens, Ga	University of Georgia, Law Department	Sylvanus Morris, LL. D.
Atlanta, Ga	Atlanta Law School	Hamilton Douglas, Ph. M., LL. B.
Do	Emory University, Lamar School of Law	William D. Thompson, acting dean.
Macon, Ga	Mercer University Law School	Emory Speer, LL. D.
Moscow, Idaho	University of Idaho College of Law	James J. Gill, LL. B., acting dean.
Bloomington, Ill	Illinois Wesleyan University, Bloomington Law School.	Charles L. Capen, A. M.
Chicago, Ill	Chicago Law School, Law Department, Midland University.	John J. Tobias, LL. B., chancellor.
Do	Chicago-Kent Law School	Edmund W. Burke, A. M.
Do	De Paul University Law School	Francis X. Busch, LL. D.
Do	Hamilton College of Law	John H. Cummings, LL. B.
Do	John Marshall Law School	Edward T. Lee, LL. B.
Do	Loyola University College of Law	
Do	Northern Illinois University Law School	Frederick Juchhoff, LL. D.
Do	Northwestern University Law School	John H. Wigmore, LL. D.
Do	University of Chicago Law School	James Parker Hall, LL. B.
Urbane, Ill	University of Illinois College of Law	Henry W. Ballantine, LL. B.
Bloomington, Ind	Indiana University School of Law	Charles M. Hepburn, LL. D.
Danville, Ind	Central Normal College School of Law	Jonathan Rigdon, Ph. D., president.
Indianapolis, Ind	Benjamin Harrison Law School	Theophilus J. Moll, LL. M.
Do	University of Indianapolis, Indiana Law School	James A. Rohbach, LL. D.
Notre Dame, Ind	University of Notre Dame, Law Department	William Hoynes, LL. D.
Valparaiso, Ind	Valparaiso University Law School	M. J. Bowman, jr., LL. B.
Des Moines, Iowa	Drake University College of Law	Edward Baker Evans, LL.M.
Iowa City, Iowa	State University of Iowa College of Law	Dudley O. McGovney, LL.B.
Lawrence, Kans	University of Kansas Law School	James W. Green, A. M.
Topeka, Kans	Washburn College School of Law	Albert J. Harno, LL. B.
Lexington, Ky	University of Kentucky College of Law	William T. Lafferty, A. M.
Louisville, Ky	Jefferson School of Law	Judge Thomas R. Gordon.
Do	State University Central Law School (colored)	William C. Brown.
Do	University of Louisville, Law Department	Charles B. Seymour, LL. B.
Baton Rouge, La	Louisiana State University, Law Department	Robert L. Tullis, LL. B
New Orleans, La	Loyola University Law School	Hugh C. Cage, LL. B.
Do	Tulane University of Louisiana College of Law	Charles Payne Fenner, LL.B.
Orono, Me	University of Maine College of Law	Robert J. Aley, LL. D.
Baltimore, Md	University of Maryland Law School	Henry D. Harlan, LL. D.

XXII.—PRESIDENTS OR DEANS OF PROFESSIONAL SCHOOLS—Continued.

2. SCHOOLS OF LAW—Continued.

Location.	Name of institution.	President or dean.
Boston, Mass	Boston University School of Law	Homer Albers, LL. B.
Do	Portia School of Law	Arthur W. McLean, J. M.
Do	Suffolk Law School	Gleason L. Archer, LL. B.
Do	Northeatern College School of Law	Frank Palmer Speare, president.
Cambridge, Mass	Howard University Law School	Roscoe Pound, Ph. D., LL. M., LL. D.
Ann Arbor, Mich	University of Michaigan Law School	
Detroit, Mich	Detroit College of Law (conducted by Detroit Young Men's Christian Association).	Benjamin D. Edwards, Ph. B., executive director; William Krichbaum, LL. B., dean.
Do	University of Detroit Law School	Judge George S. Hosmer.
Minneapolis, Minn	University of Munnesota College of Law	William R. Vance, LL. D.
Do	Minnesota College of Law (Inc.)	George T. Simpson.
St. Paul, Minn	St. Paul College of Law	Judge George L. Bunn.
Jackson, Miss	Millsaps College Law School	A. H. Whitfield, LL. D.
University, Miss	University of Mississippi, Department of Law	Leonard J. Farley, LL. D.
Columbia, Mo	University of Missouri School of Law	George L. Clark, S. J. D., acting dean.
Kansas City, Mo	Kansas City School of Law	Edward D. Ellison.
St. Louis, Mo	Benton College of Law	George L. Corlis, LL. B.
Do	City College of Law and Finance	Eustace C. Wheeler, LL. B.
Do	St. Louis University Institute of Law	Paul Bakewell, LL. D.
Do	Washington University, St. Louis Law School	Richard L. Goode, LL. D.
Missoula, Mont	University of Montana College of Law	Albert N. Whitlock, LL. B.
Lincoln, Nebr	University of Nebraska College of Law	William Granger Hastings, A. B.
Omaha, Nebr	Creighton University, Creighton College of Law	Paul L. Martin, LL. B.
Do	University of Omaha, Omaha School of Law	Judge Alexander C. Troup.
Newark, N. J	New Jersey Law School	Richard D. Currier, LL. B.
Albany, N. Y	Union University, Albany Law School	J. Newton Fiero, LL. D.
Brooklyn, N. Y	St. Lawrence University, Brooklyn Law School	William P. Richardson, LL. D.
Buffalo, N. Y	University of Buffalo, Buffalo Law School	Carlos C. Alden, J. D.
Ithaca, N. Y	Cornell University College of Law	Edwin H. Woodruff, LL. B.
New York, N. Y	Columbia University School of Law	Harlan F. Stone, LL. B.
Do	Fordham University School of Law	John Whalen, LL. D.
Do	New York Law School	George Chase, LL. B.
Do	New York University Law School	Frank H. Sommer, LL. D.
Syracuse, N. Y	Syracuse University College of Law	Frank R. Walker, LL. B.
Chapel Hill, N. C	University of North Carolina Law Department	Lucius Polk McGehee, A. B.
Durham, N. C	Trinity College Law School	Samuel Fox Mordecai, LL. D.
Wake Forrest, N. C	Wake Forrest College Law School	Needham Y. Gulley, LL. D.
University, N. Dak	University of North Dakota School of Law	George F. Wells, LL. D.
Ads. Ohio	Ohio Northern University, College of Law	Jay P. Taggart, LL. B.
Cincinnati, Ohio	University of Cincinnati, College of Law	Alfred B. Benedict, LL. B., dean.
Do	Young Men's Christian Association Night Law School.	
Cleveland, Ohio	Baldwin-Wallace College, Cleveland Law School	Willis Vickery, LL. D.
Do	Western Reserve University, Franklin T. Backus Law School.	Walter Thomas Dunmore, LL. B.
Columbus, Ohio	Ohio State University College of Law	John Jay Adams, LL. D.
Toledo, Ohio	St. John's University College of Law	John P. Manton.
Do	Toledo University College of Law	Aaron B. Cohn, LL. B.
Norman, Okla	University of Oklahoma School of Law	Julien C. Monnet, LL. B.
Eugene, Oreg	Law School, University of Oregon	Edward W. Hope, Ph. D.
Salem, Oreg	Willamette University College of Law	I. H. Van Winkle, LL. B.
Carlisle, Pa	Dickinson College, Dickinson School of Law	William Trickett, LL. D.
Philadelphia, Pa	Temple University Law School	Francis Chapman, LL. D.
Do	University of Pennsylvania Law School	William E. Mikell, B. S., LL. M.
Pittsburgh, Pa	Duquesne University School of Law	Judge Joseph M. Swearingen.
Do	University of Pittsburgh, Pittsburgh Law School	John Douglas Shafer, LL. D.
Manila, P. I	University of the Philippines, College of Law	George A. Malcolm, LL. B.
Rio Piedras, Porto Rico.	University of Porto Rico College of Law	Louis W. Rapeer, Ph. D.
Columbia, S. C	University of South Carolina Law School	Jno. Peyre Thomas, jr.
Vermilion, S. Dak	University of South Dakota College of Law	Marshall McKusick, LL. B.
Chattanooga, Tenn	Chattanooga College of Law	Charles R. Evans, A. M.
Knoxville, Tenn	The University of Tennessee College of Law	Charles W. Turner, A. M.
Lebanon, Tenn	Cumberland University Law School	Nathan Green, LL. D.
Nashville, Tenn	Vanderbilt University Law School	John Bell Keeble, LL. B.
Austin, Tex	University of Texas, Department of Law	John Charles Townes, LL. D.
Salt Lake City, Utah	University of Utah College of Law	William H. Leary, J. D.
Charlottesville, Va	University of Virginia, Department of Law	William Minor Lile, LL. D.
Lexington, Va	Washington and Lee University School of Law	Joseph R. Long, LL. B.
Richmond, Va	Richmond College School of Law	F. W. Boatwright, LL. D.
Seattle, Wash	University of Washington Law School	John T. Condon, LL. M.

XXII.—PRESIDENTS OR DEANS OF PROFESSIONAL SCHOOLS—Continued.

2. SCHOOLS OF LAW—Continued.

Location.	Name of institution.	President or dean.
Spokane, Wash	Gonzaga University, Department of Law	Edward J. Cannon, LL. D.
Morgantown, W. Va	West Virginia University College of Law	Henry Craig Jones, LL. B.
Madison, Wis	University of Wisconsin Law School	Harry Sanger Richards, LL. D.
Milwaukee, Wis	Marquette University College of Law	Max Schoetz, A. B., LL. B.

3. SCHOOLS OF MEDICINE.

[(H) designates the medical school as Homeopathic and (E) as Eclectic.]

Birmingham, Ala	University of Alabama, Graduate School of Medicine.	Lewis C. Morris, M. D.
Mobile, Ala	University of Alabama, Department of Medicine	Tucker H. Frazer, M. D.
Little Rock, Ark	University of Arkansas, Medical Department	Morgan Smith, M. D.
Loma Linda and Los Angeles, Cal.	College of Medical Evangelists	Newton G. Evans, M. D., president.
Los Angeles, Cal.	Los Angeles Medical Department of the University of California.	George H. Kress, M. D., dean.
Do	University of Southern California, College of Physicians and Surgeons.	Charles W. Bryson, M. D.
San Francisco, Cal	College of Physicians and Surgeons	H. D'Arcy Power, M. D.
Do	Leland Stanford Junior University School of Medicine.	William Ophuls, M. D.
Do	University of California, Medical School[1]	Herbert C. Moffitt, M. D.
Boulder and Denver, Colo.	University of Colorado, School of Medicine	Charles N. Meader, M. D.
New Haven, Conn	Yale University, Department of Medicine	George Blumer, M. D.
Washington, D. C	George Washington University, Medical School	William C. Borden, M. D.
Do	Georgetown University, School of Medicine	George M. Kober, M. D.
Do	Howard University, Medical College (colored)	Edward A. Balloch, M. D.
Atlanta, Ga	Atlanta Medical College, School of Medicine, Emory University.	W. S. Elkin, M. D.
Augusta, Ga	Medical Department, University of Georgia	William H. Doughty, jr., M. D.
Chicago, Ill	Chicago College of Medicine and Surgery, School of Medicine of Loyola University.	Lawrence Ryan, M. D.
Do	Chicago Hospital, and Jenner, Medical College	Ezekiel P. Murdock, M. D., dean.
Do	Hahnemann Medicall College and Hospital (H)	Jos. P. Cobb, M. D.
Do	Northwestern University, Medical School	Arthur Isaac Kendall, M. D., acting dean.
Do	Rush Medical College, University of Chicago	John Milton Dodson, M. D.
Do	University of Illinois, College of Medicine	Albert C. Eycleshymer, M. D.
Bloomington and Indianapolis, Ind.	Indiana University School of Medicine	Charles P. Emerson, M. D.
Iowa City, Iowa	State University of Iowa, College of Medicine	Leo W. Dean, M. D.
Do	State University of Iowa, Homeopathic Medical Department.	George Royal, M. D.
Rosedale and Lawrence, Kans.	University of Kansas, School of Medicine	Samuel J. Crumbine, M. D., dean; Merwin T. Sudler, M. D., associate dean.
Louisville, Ky	University of Louisville, Medical Department	Henry Enos Tuley, M. D.
New Orleans, La	Tulane University of Louisiana. School of Medicine	Isadore Dyer, M. D.
Brunswick and Portland, Me.	Bowdoin Medical School	Addison S. Thayer, M. D.
Baltimore, Md	Johns Hopkins University, Medical Department	J. Whitridge Williams, M. D.
Do	University of Maryland, School of Medicine and College of Physicians and Surgeons.	J. M. H. Rowland, M. D.
Boston, Mass	Harvard University, Medical School	Edward H. Bradford, M. D. dean.
Do	Tufts College, Medical School	Charles F. Painter, M. D.
Do	Boston University, School of Medicine (H)	John P. Sutherland, M. D.
Ann Arbor, Mich	University of Michigan, Medical School	Victor C. Vaughan, M. D.
Do	University of Michigan, Homeopathic Medical School.	Wilbert B. Hinsdale, M. D.
Detroit, Mich	Detroit College of Medicine and Surgery[2]	J. Henry Carstens, M. D.
Minneapolis, Minn	University of Minnesota, Medical School	E. P. Lyon, M. D.
University, Miss	University of Mississippi, School of Medicine	Waller S. Leathers, M. D.
Columbia, Mo	University of Missouri, School of Medicine	Guy L. Noyes, M. D.
St. Louis, Mo	St. Louis College of Physicians and Surgeons	Waldo Briggs, M. D.
Do	St. Louis University, School of Medicine	Hanau W. Loeb, M. D.
Do	Washington University, Medical School	Philip A. Shaffer, M. D.
Lincoln and Omaha, Nebr.	University of Nebraska, College of Medicine	Irving S. Cutter, M. D.

[1] Includes electives in homœopathy in the curriculum of the medical school.
[2] Became a part of education system of the city of Detroit, July 1, 1918.

XXII.—PRESIDENTS OR DEANS OF PROFESSIONAL SCHOOLS—Continued.

3. SCHOOLS OF MEDICINE—Continued.

[(H) designates the medical school as Homeopathic and (E) as Eclectic.]

Location.	Name of institution.	President or dean.
Lincoln, Nebr	Lincoln Medical College (E)	F. L. Wilwoth, M. D.
Omaha, Nebr	John A. Creighton Medical College	James R. Clemens, M. D.
Hanover, N. H	Dartmouth Medical School	John M. Gile, M. D.
Albany, N. Y	Albany Medical College, Union University	Thomas Ordway, M. D.
Brooklyn, N. Y	Long Island College Hospital	Otto V. Huffman, M. D.
Buffalo, N. Y	University of Buffalo, Medical Department	C. Sumner Jones, M. D.
New York, N. Y	Columbia University College of Physicians and Surgeons.	Samuel W. Lambert, M. D.
New York and Ithaca, N. Y.	Cornell University, Medical College	Walter L. Niles, M. D., acting dean.
New York, N. Y	Fordham University, School of Medicine	Joseph Byrne, M. D., dean.
Do	University and Bellevue Hospital Medical College.	Samuel A. Brown, M. D., dean.
Do	New York Homeopathic Medical College and Flower Hospital.	Royal S. Copeland, M. D.
Syracuse, N. Y	Syracuse University, College of Medicine	John L. Heffron, M. D.
Chapel Hill, N. C	University of North Carolina, School of Medicine	Issac H. Manning, M. D.
Raleigh, N. C	Shaw University, Leonard Medical School (colored)	George H. Stoddard, M. D.
Wake Forest, N. C	Wake Forest College, School of Medicine	William L. Poteat, M. D.
University, N. Dak	University of North Dakota, School of Medicine	Harley E. French, M. D.
Cincinnati, Ohio	University of Cincinnati, College of Medicine	Christian R. Holmes, M. D.
Do	Eclectic Medical College.	Rolla L. Thomas, M. D.
Cleveland, Ohio	Western Reserve University, School of Medicine	Carl A. Hamann, M. D.
Columbus, Ohio	Ohio State University, College of Medicine	E. F. McCampbell, M. D.
Do	Ohio State University, College of Homeopathic Medicine.	Claude A. Burrett, M. D.
Norman and Oklahoma City, Okla.	University of Oklahoma, School of Medicine	Le Roy Long, M. D.
Portland, Oreg	University of Oregon, Medical School	Kenneth A. J. Mackenzie, M. D.
Philadelphia, Pa	Jefferson Medical College	Ross V. Patterson, M. D., dean.
Do	Medico-Chirurgical College and Hospital, Graduate School of Medicine of the University of Pennsylvania.	
Do	Temple University, Department of Medicine	Frank C. Hammond, M. D.
Do	Medical School of the University of Pennsylvania	William Pepper, M. D.
Do	Woman's Medical College of Pennsylvania and Its Hospital.	Martha Tracy, M. D.
Do	Hahnemann Medical College and Hospital of Philadelphia (H).	W. A. Pearson, M. D.
Pittsburgh, Pa	University of Pittsburgh, School of Medicine	Ogden Methias Edwards, jr., M. D.
Manila, P. I	University of the Philippines, College of Medicine and Surgery.	Fernando Calderon, M. D., dean.
Charleston, S. C	Medical College of the State of South Carolina	Robert Wilson, jr., M. D.
Vermilion, S. Dak	University of South Dakota, College of Medicine	Christian P. Lommen, M. D.
Memphis, Tenn	University of Tennessee, College of Medicine	A. Hermsmeier Wittenborg, M. D.
Nashville, Tenn	Vanderbilt University, School of Medicine	B. F. Hambleton, M. D., acting dean.
Do	Meharry Medical College (colored)	G. W. Hubbard, M. D., president.
Dallas, Tex	Baylor University, Medical Department	Edward H. Cary, M. D.
Galveston, Tex	University of Texas, School of Medicine	William S. Carter, M. D.
Salt Lake City, Utah	University of Utah, School of Medicine	Perry G. Snow, B. A., M. D.
Burlington, Vt	University of Vermont, College of Medicine	Henry C. Tinkham, M. D.
Charlottesville, Va	University of Virginia, Medical Department	Theodore Hough, M. D.
Richmond, Va	Medical College of Virginia	Stuart McGuire, M. D.
Morgantown, W. Va	West Virginia University, School of Medicine	John N. Simpson, M. D.
Madison, Wis	University of Wisconsin, Medical School	Charles R. Bardeen, M. D.
Milwaukee, Wis	Marquette University, School of Medicine	Louis F. Jermain, M. D.

4. SCHOOLS OF DENTISTRY.

Los Angeles, Cal	University of Southern California, College of Dentistry.	Lewis E. Ford.
San Francisco, Cal	College of Physicians and Surgeons, Department of Dentistry.	Charles Boxton.
Do	University of California, College of Dentistry	Guy S. Millberry.
Denver, Colo	Colorado College of Dental Surgery, University of Denver.	H. A. Fynn.
Washington, D. C	George Washington University, Department of Dentistry.	Oscar B. Hunter, M. D.
Do	Georgetown University, Dental Department	Shirley W. Bowles, D.D. S.
Do	Howard University, Dental College (colored)	Edward A. Balloch, M. D.
Atlanta, Ga	Atlanta Dental College	Claude Hughes.
Do	Southern Dental College	Sheppard W. Foster.

XXII.—Presidents or Deans of Professional Schools—Continued.

4. SCHOOLS OF DENTISTRY—Continued.

Location.	Name of institution.	President or dean.
Chicago, Ill	Chicago College of Dental Surgery, Valparaiso University.	Truman W. Brophy, LL.D.
Do	Northwestern University, Dental School	Thomas L. Gilmer, M. D.
Do	University of Illinois, College of Dentistry	Frederick B. Moorehead, M. D.
Indianapolis, Ind	Indiana Dental College, University of Indianapolis.	Frederic R. Henshaw.
Valparaiso, Ind	Valparaiso University, College of Dentistry	Truman W. Brophy.
Iowa City, Iowa	State University of Iowa, College of Dentistry	Frank T. Breene.
Louisville, Ky	Louisville College of Dentistry, Central University of Kentucky.	William E. Grant.
New Orleans, La	Loyola School of Dentistry, Loyola University	Jules J. Sarrazin.
Do	Tulane University of Louisiana, School of Dentistry.	Wallace Wood, jr.
Baltimore, Md	Baltimore College of Dental Surgery	W. G. Foster.
Do	University of Maryland, Dental Department	Timothy O. Heatwole.
Boston, Mass	Harvard University, Dental School	Eugene Hanes Smith.
Do	Tufts College, Dental School	William Rice.
Ann Arbor, Mich	University of Michigan, College of Dental Surgery.	Marcus L. Ward.
Minneapolis, Minn	University of Minnesota, College of Dentistry	Alfred Owre.
Kansas City, Mo	Kansas City Dental College	Charles C. Allen.
Do	Western Dental College	R. J. Rinehart, secretary.
St. Louis, Mo	St. Louis University, School of Dentistry	James P. Harper.
Do	Washington University, School of Dentistry	John H. Kennerly.
Lincoln, Nebr	Lincoln Dental College	Wallace Clyde Davis.
Omaha, Nebr	Creighton University, College of Dentistry	A. Hugh Hipple.
Jersey City, N. J	College of Jersey City, Department of Dentistry	Herbert S. Sutphen.
Buffalo, N. Y	University of Buffalo, College of Dentistry	Daniel H. Squire.
New York, N. Y	College of Dental and Oral Surgery of New York	William Carr, M. D.
Do	Columbia University, Dental School	James C. Egbert, director.
Do	New York College of Dentistry	Alfred R. Starr.
Cincinnati, Ohio	Cincinnati College of Dental Surgery	G. S. Junkerman, M. D.
Do	Ohio College of Dental Surgery	Henry T. Smith.
Cleveland, Ohio	Western Reserve University, Dental School	Frank M. Casto.
Columbus, Ohio	Ohio State University, College of Dentistry	Harry M. Semans.
Portland, Oreg	North Pacific College of Dentistry	Herbert C. Miller.
Philadelphia, Pa	Philadelphia Dental College, Temple University	I. Norman Broomell, D. D. S.
Do	Thomas W. Evans Museum and Dental Institute, School of Dentistry, University of Pennsylvania.	Charles R. Turner, M. D.
Pittsburgh, Pa	University of Pittsburgh, School of Dentistry	H. Edmund Friesell.
Memphis, Tenn	College of Dentistry, University of Tennessee	Joseph A. Gardner.
Nashville, Tenn	Vanderbilt University, Dental Department	Henry W. Morgan
Do	Meharry Dental College (colored)	G. W. Hubbard, M. D., president.
Dallas, Tex	College of Dentistry, Baylor University	J. S. Wright.
Houston, Tex	Texas Dental College	O. F. Gambati.
Richmond, Va	School of Dentistry, Medical College of Virginia	J. A. C. Hoggan, chairman of faculty.
Milwaukee, Wis	Marquette University, Dental Department	Henry L. Banzhaf, D. D. S.

5. SCHOOLS OF PHARMACY.

Auburn, Ala	Alabama Polytechnic Institute, Pharmacy Department.	L. S. Blake, M. S.
Mobile, Ala	University of Alabama, Department of Pharmacy.	Tucker H. Frazer.
Los Angeles, Cal	University of Southern California, College of Pharmacy.	Laird J. Stabler, M. S.
San Francisco, Cal	California College of Pharmacy, University of California.	Franklin T. Green.
Do	College of Physicians and Surgeons, Department of Pharmacy.	John Henry Flint.
Boulder, Colo	University of Colorado, College of Pharmacy	Francis Ramaley, Ph. D., acting dean.
Washington, D. C	George Washington University, National College of Pharmacy.	H. E. Kalusowski.
Do	Howard University, Pharmaceutic College (colored).	Edward A. Balloch, M.D.
Athens, Ga	University of Georgia, School of Pharmacy	Robert C. Wilson, head of department.
Atlanta, Ga	Atlanta College of Pharmacy	George F. Payne.
Do	Southern College of Pharmacy	R. C. Hood.
Chicago, Ill	Central States College of Pharmacy	George Louis Secord, Ph. G.
Do	University of Illinois, School of Pharmacy	William B. Day, acting dean.
Angola, Ind	Tri-State College of Pharmacy	C. C. Sherrard.
Indianapolis, Ind	Indianapolis College of Pharmacy	Ferd. A. Mueller.
Lafayette, Ind	School of Pharmacy, Purdue University	Charles B. Jordan, M. S.
Notre Dame, Ind	University of Notre Dame, School of Pharmacy	Robert Lee Green.
Valparaiso, Ind	Valparaiso University, Department of Pharmacy.	G. D. Timmons, B. S.

XXII.—PRESIDENTS OR DEANS OF PROFESSIONAL SCHOOLS—Continued.

5. SCHOOLS OF PHARMACY—Continued.

Location.	Name of institution.	President or dean.
Des Moines, Iowa	Highland Park College of Pharmacy and Chemistry	Elbert O. Kagy, Ph. C., director.
Iowa City, Iowa	State University of Iowa, College of Pharmacy	Wilber J. Teeters, M. S.
Lawrence, Kans	University of Kansas, School of Pharmacy	Lucius E. Sayre, M. S.
Louisville, Ky	Louisville College of Pharmacy	Oscar C. Dilly.
New Orleans, La	New Orleans College of Pharmacy (affiliated with Loyola University).	Philip Asher.
Do	Tulane University of Louisiana, School of Pharmacy.	Isadore Dyer.
Orono, Me	University of Maine, Department of Pharmacy	William A. Jarrett.
Baltimore, Md	Department of Pharmacy, University of Maryland	Daniel Base, Ph. D.
Boston, Mass	Massachusetts College of Pharmacy	Theodore J. Bradley.
Ann Arbor, Mich	University of Michigan, College of Pharmacy	A. B. Stevens, dean.
Big Rapids, Mich	Ferris Institute, Pharmacy Department	M. A. Jones, principal.
Minneapolis, Minn	University of Minnesota, College of Pharmacy	Frederick J. Wulling, Ph. D.
University, Miss	University of Mississippi, School of Pharmacy	Henry M. Faser.
Kansas City, Mo	Kansas City College of Pharmacy and Natural Sciences.	David V. Whitney.
St. Louis, Mo	St. Louis College of Pharmacy	Henry M. Whelpley, M. D.
Missoula, Mont	University of Montana, School of Pharmacy	Charles E. Mollet, dean.
Lincoln, Nebr	University of Nebraska, College of Pharmacy	Rufus A. Lyman, A. M.
Omaha, Nebr	Creighton University, Department of Pharmacy	Howard C. Newton.
Jersey City, N. J	College of Jersey City, Department of Pharmacy	Joseph Koppel.
Newark, N. J	New Jersey College of Pharmacy	William O. Kuebler.
Albany, N. Y	Albany College of Pharmacy, Union University	William Mansfield.
Brooklyn, N. Y	Brooklyn College of Pharmacy	William C. Anderson.
Buffalo, N. Y	Buffalo College of Pharmacy, University of Buffalo.	Willis G. Gregory.
New York, N. Y	College of Pharmacy of the City of New York Columbia University.	Henry H. Rusby.
Do	Fordham University, College of Pharmacy	Jacob Diner, dean
Chapel Hill, N. C	University of North Carolina, Department of Pharmacy.	Edward V. Howell, A. B.
Raleigh, N. C	Leonard School of Pharmacy, Shaw University	George H. Stoddard, A. M.
Agricultural College, N. Dak.	North Dakota Agricultural College, School of Pharmacy.	E. F. Ladd, LL. D.
Ada, Ohio	Ohio Northern University, College of Pharmacy	
Cincinnati, Ohio	Cincinnati College of Pharmacy	Walter R. Griess.
Cleveland, Ohio	Cleveland School of Pharmacy, Western Reserve University.	Edward Spease, dean.
Columbus, Ohio	Ohio State University, College of Pharmacy	Clair A. Dye, acting dean.
Toledo, Ohio	Toledo University, College of Pharmacy	William McKendre Reed.
Norman, Okla	State University of Oklahoma, School of Pharmacy	Howard S. Browne.
Corvallis, Oreg	Oregon Agricultural College, School of Pharmacy	Adolph Zeifle, B. S., dean.
Portland, Oreg	North Pacific College of Pharmacy	Herbert C. Miller.
Philadelphia, Pa	Philadelphia, College of Pharmacy	Howard B. French, Ph. G.
Do	Temple University, Department of Pharmacy	John R. Minehart, M. D.
Pittsburgh, Pa	Pittsburgh College of Pharmacy, University of Pittsburgh.	Julius A. Koch.
Rio Piedras, Porto Rico	University of Porto Rico, College of Pharmacy	Louis W. Rapeer, Ph. D.
Providence, R. I	Rhode Island College of Pharmacy and Allied Sciences.	Edwin E. Calder.
Charleston, S. C	Medical College of State of South Carolina, Department of Pharmacy.	Robert Wilson, jr.
Brookings, S. Dak	South Dakota State College of Agriculture and Mechanic Arts, Department of Pharmacy.	Earl R. Serles, professor.
Memphis, Tenn	School of Pharmacy of The University of Tennessee	A. Hermsmeier Wittenborg, M. D.
Nashville, Tenn	Vanderbilt University, School of Pharmacy	J. T. McGill.
Do	Meharry College of Pharmacy (colored)	G. W. Hubbard, M. D., president.
Dallas, Tex	Baylor University, College of Pharmacy	Edward H. Cary, M. D. (acting dean).
Galveston, Tex	University of Texas, School of Pharmacy	William S. Carter.
Salt Lake City, Utah	University of Utah, School of Pharmacy	Le Roy Dey Swingle, Ph. D.
Richmond, Va	School of Pharmacy, Medical College of Virginia	A. Bolenbaugh, B. S., chairman of faculty.
Pullman, Wash	State College of Washington, School of Pharmacy	P. H. Dustine, acting head.
Seattle, Wash	University of Washington, College of Pharmacy	Charles W. Johnson, Ph. D.
Morgantown, W. Va	Department of Pharmacy, West Virginia University.	John N. Simpson.
Madison, Wis	University of Wisconsin course in Pharmacy	Edward Kremers, director.

6. SCHOOLS OF VETERINARY MEDICINE.

Auburn, Ala	Alabama Polytechnic Institute, College of Veterinary Medicine.	C. A. Cary.
San Francisco, Cal	San Francisco Veterinary College	M. J. O'Rourke president.
Fort Collins, Colo	**Colorado Agricultural College, Division of Veterinary Medicine.**	**George H. Glover.**

XXII.—PRESIDENTS OR DEANS OF PROFESSIONAL SCHOOLS—Continued.

6. SCHOOLS OF VETERINARY MEDICINE—Continued.

Location.	Name of institution.	President or dean.
Washington, D. C	George Washington University, College of Veterinary Medicine.	David E. Buckingham.
Do	United States College of Veterinary Surgeons	Hulbert Young.
Chicago, Ill	Chicago Veterinary College	Joseph Hughes.
Do	McKillip Veterinary College	Charles Frazier, dean.
Indianapolis, Ind	Indiana Veterinary College	George H. Roberts.
Terre Haute, Ind	Terre Haute Veterinary College	C. I. Fleming, dean.
Ames, Iowa	Iowa State College, Division of Veterinary Medicine	Charles H. Stange.
Manhattan, Kans	Kansas State Agricultural College, Veterinary Department.	
East Lansing, Mich	Michigan Agricultural College, Veterinary Division	Richard P. Lyman.
Grand Rapids, Mich	Grand Rapids Veterinary College [1]	C. S. McGuire.
Columbia, Mo	University of Missouri, Department of Veterinary Science.	John Waldo Connaway, D. V. S., chairman.
Kansas City, Mo	Kansas City Veterinary College	Albert T. Kinsley.
St. Joseph, Mo	St. Joseph Veterinary College	R. C. Moore.
Reno, Nev	University of Nevada, State Veterinary Control Service.	Edward Records, V. M. D., director.
Ithaca, N. Y	New York State Veterinary College at Cornell University.	Veranus A. Moore.
New York, N. Y	New York State Veterinary College at New York University.	W. Horace Hoskins.
Agricultural College, N. Dak.	North Dakota Agricultural College, School of Veterinary Medicine and Surgery.	A. F. Schalk.
Cincinnati, Ohio	Cincinnati Veterinary College	Louis P. Cook.
Columbus, Ohio	Ohio State University College of Veterinary Medicine.	Oscar V. Brumley, acting dean.
Corvallis, Oreg	Oregon Agricultural College, Department of Veterinary Medicine.	Bennett T. Simms, Chief in Veterinary Medicine.
Philadelphia, Pa	University of Pennsylvania, School of Veterinary Medicine.	Louis A. Klein.
Pullman, Wash	Washington State College, Veterinary Department.	Sofus B. Nelson.

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[1] Has discontinued sessions for the period of the war.

XXIII.—PRINCIPALS OF NORMAL AND KINDERGARTEN TRAINING SCHOOLS.

1. PUBLIC NORMAL SCHOOLS.[1]

Location.	Name of institution.	For men, for women, or coeducational.	Principal.
ALABAMA.			
Daphne *	State Normal School	Coed	Hilary H. Holmes.
Florence	do	Coed	Henry J. Willingham.
Jacksonville	do	Coed	C. W. Daugette.
Livingston	do	Coed	George W. Brock.
Montgomery	State Colored Normal School	Coed	J. W. Beverly.
Moundville	State Normal School	Coed	Raleigh W. Greene.
Normal	Agricultural and Mechanical College for Negroes.	Coed	Walter S. Buchanan.
Troy	State Normal School	Coed	E. M. Shackelford.
Tuskegee	Tuskegee Normal and Industrial Institute (colored).	Coed	Robert R. Moton.
ARIZONA.			
Flagstaff	Northern Arizona Normal School	Coed	G. E. Cornelius
Tempe *	Tempe Normal School of Arizona	Coed	Arthur J. Matthews
ARKANSAS.			
Conway	Arkansas State Normal School	Coed	Burr W. Torreyson.
Pine Bluff	Branch Normal College (colored)	Coed	J. G. Ish, Jr.
CALIFORNIA.			
Arcata	Humboldt State Normal School	Coed	N. B. Van Matre.
Chico	State Normal School	Coed	C. M. Osenbaugh.
Fresno	do	Coed	C. L. McLane.
Los Angeles	do.*	Coed	Ernest C. Moore.
San Diego	do	Coed	Edward L. Hardy.
San Francisco	do.*	Coed	Frederick Burk.
San Jose	do.*	Coed	Morris Elmer Dailey.
Santa Barbara	State Normal School of Manual Arts and Home Economics.	Coed	Clarence L. Phelps.

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[1] Institutions starred (*) have kindergarten training departments.

XXIII.—PRINCIPALS OF NORMAL AND KINDERGARTEN TRAINING SCHOOLS—Contd.

1. PUBLIC NORMAL SCHOOLS—Continued.

Location.	Name of institution.	For men, for women, or coeducational.	Principal.
COLORADO.			
Gunnison	Colorado State Normal School	Coed	James H. Kelley.
CONNECTICUT.			
Bridgeport	Bridgeport City Normal School	Coed	Edward E. Cortright.
Danbury	State Normal Training School	Coed	John R. Perkins.
New Britain	do.*	Coed	Marcus White.
New Haven	do	Coed	Arthur B. Morrill.
Willimantic	do	Coed	George H. Shafer.
DISTRICT OF COLUMBIA.			
Washington	J. Ormond Wilson Normal School *	Coed	Anne M. Goding.
Do	Myrtilla Miner Normal School*(colored).	Coed	Lucy E. Moten.
GEORGIA.			
Athens	State Normal School	Coed	Jere M. Pound.
Atlanta	Atlanta Normal Training School	Coed	Mary W. Postell.
Milledgeville	Georgia Normal and Industrial College	Women.	Marvin M. Parks.
Valdosta	Southern Georgia State Normal College	Women.	Richard H. Powell.
IDAHO.			
Albion	State Normal School	Coed	George A. Axline.
Lewiston	do	Coed	Oliver M. Elliott.
ILLINOIS.			
Carbondale	Southern Illinois State Normal University.	Coed	Henry W. Shryock.
Charleston	Eastern Illinois State Normal School	Coed	Livingston C. Lord.
Chicago	Chicago Normal School *	Coed	Wm. B. Owen.
De Kalb	Northern Illinois State Normal School	Coed	John W. Cook.
Macomb	Western Illinois State Normal School	Coed	Walter P. Morgan.
Normal	Illinois State Normal University *	Coed	David Felmley.
INDIANA.			
Fort Wayne	Fort Wayne Normal School	Coed	Flora Wilber.
Indianapolis	Indianapolis Normal School	Coed	Marion Lee Webster.
Muncie	Indiana State Normal School, Eastern Division.	Coed	B. F. Moore, dean.
Terre Haute	Indiana State Normal School	Coed	William W. Parsons.
IOWA.			
Shenandoah	Western Normal College	Coed	Charles F. Garrett.
KANSAS.			
Emporia	State Normal School *	Coed	Thomas W. Butcher.
Hays	Fort Hays Kansas Normal School	Coed	William A. Lewis.
Pittsburg	State Manual Training Normal School *.	Coed	W. A. Brandenburg.
KENTUCKY.			
Bowling Green	Western Kentucky State Normal School.	Coed	H. H. Cherry.
Frankfort	State Normal and Industrial Institute for Colored Persons.	Coed	Green P. Russell.
Louisville	Louisville Normal School *	Coed	Elizabeth Breckinridge.
Richmond	Eastern Kentucky State Normal School.	Coed	T. J. Coates.
LOUISIANA.			
Natchitoches	Louisiana State Normal School	Coed	Victor L. Roy.
New Orleans	New Orleans Normal School *	Coed	Margaret C. Hanson.
MAINE.			
Castine	Eastern State Normal School	Coed	Albert F. Richardson.
Farmington	Farmington State Normal School	Coed	Wilbert G. Mallett.
Fort Kent	Madawaska Training School	Coed	Mary P. Nowland.
Gorham	Western State Normal School	Coed	Walter E. Russell.
Lewiston	Lewiston Normal Training School	Coed	Adelaide V. Finch.
Machias	Washington State Normal School	Coed	William L. Powers.
Presque Isle	Aroostook State Normal School	Coed	San Lorenzo Merriman.

XXIII.—PRINCIPALS OF NORMAL AND KINDERGARTEN TRAINING SCHOOLS—Contd.

1. PUBLIC NORMAL SCHOOLS—Continued.

Location.	Name of institution.	For men, for women, or coeducational.	Principal.
MARYLAND.			
Baltimore	Baltimore Teachers Training School	Coed	Norman W. Cameron.
Do	Colored Training School	Coed	Joseph H. Lockerman.
Bowie	Maryland State Normal and Industrial School (colored).	Coed	D. S. S. Goodloe.
Frostburg	Maryland State Normal School	Coed	James Widdowson.
Towson	do	Coed	Henry S. West.
MASSACHUSETTS.			
Boston	Boston Normal School *	Coed	Wallace C. Boyden.
Do	Massachusetts Normal Art School	Coed	James F. Hopkins.
Bridgewater	State Normal School *	Coed	Arthur C. Boyden.
Fitchburg	do.*	Coed	John G. Thompson.
Framingham	do	Coed	James Chalmers.
Hyannis	do	Coed	Wm. A. Baldwin.
Lowell	do	Coed	John J. Mahoney.
North Adams	do	Coed	Frank F. Murdock.
Salem	do	Coed	Joseph Asbury Pitman.
Westfield	do	Coed	Clarence A. Brodeur.
Worcester	do.*	Coed	Wm. B. Aspinwall.
MICHIGAN.			
Detroit	Detroit City Normal School *	Coed	John F. Thomas.
Kalamazoo	Western State Normal School *	Coed	Dwight B. Waldo.
Marquette	Northern State Normal School *	Coed	James H. Kaye.
Mount Pleasant	Central State Normal School *	Coed	Eugene C. Warriner.
Ypsilanti	Michigan State Normal College *	Coed	Charles McKenny.
MINNESOTA.			
Duluth	State Normal School *	Coed	Eugene W. Bohannon.
Mankato	do.*	Coed	Chas. H. Cooper.
Moorhead	do.*	Coed	Frank A. Weld.
St. Cloud	do	Coed	Joseph C. Brown.
Winona	State Normal School *	Coed	Guy E. Maxwell.
MISSISSIPPI.			
Hattiesburg	Mississippi Normal College	Coed	Joe Cook.
MISSOURI.			
Cape Girardeau	State Normal School	Coed	W. S. Dearmont.
Jefferson City	Lincoln Institute (colored)	Coed	Clement Richardson.
Kirksville	State Normal School	Coed	John R. Kirk.
Maryville	do*	Coed	Ira Richardson.
St. Louis	Harris Teachers College*	Women	E. George Payne.
Springfield	State Normal School*	Coed	Clyde M. Hill.
Warrensburg	do*	Coed	Eldo L. Hendricks.
MONTANA.			
Dillon	Montana State Normal School	Coed	Joseph E. Monroe.
NEBRASKA.			
Chadron	State Normal School	Coed	Robert I. Elliott.
Kearney	do*	Coed	George S. Dick.
Peru	do*	Coed	E. L. Rouse.
Wayne	do*	Coed	U. S. Conn.
NEW HAMPSHIRE.			
Keene	State Normal School	Coed	Wallace E. Mason.
Plymouth	do	Coed	Ernest L. Silver.
NEW JERSEY.			
Jersey City	Teachers' Training School	Coed	Joseph H. Brensinger.
Montclair	New Jersey State Normal School*	Coed	Chas. S. Chapin.
Newark	do*	Coed	W. S. Willis.
Paterson	Paterson Normal Training School	Coed	Frank W. Smith.
Trenton	New Jersey State Normal School*	Coed	Jerohn J. Savitz.
NEW MEXICO.			
El Rito	Spanish-American Normal School	Coed	Roscoe R. Hill.
East Las Vegas	New Mexico Normal University	Coed	Frank H. H. Roberts.
Silver City	New Mexico Normal School	Coed	E. L. Enloe.

XIII.—Principals of Normal and Kindergarten Training Schools—Contd.

1. PUBLIC NORMAL SCHOOLS—Continued.

Location.	Name of institution.	For men, for women, or coeducational.	Principal.
NEW YORK.			
Albany	Teachers' Training School*	Coed	Thomas S. O'Brien.
Brockport	State Normal and Training School	Coed	Alfred C. Thompson.
Brooklyn	Training School for Teachers *	Coed	Emma L. Johnston.
Buffalo	State Normal School *	Coed	
Cohoes	Cohoes Training School	Coed	Harriet L. Knapp.
Cortland	State Normal and Training School *	Coed	Harry De W. De Groat.
Fredonia	do*	Coed	Myron T. Dana.
Geneseo	Geneseo State Normal School *	Coed	James V. Sturges.
Jamaica	Training School for Teachers	Coed	Archibald C. McLachlan.
New Paltz	State Normal School *	Coed	John C. Bliss.
New York	New York Training School for Teachers *	Coed	Hugo Newman.
Oneonta	State Normal School *	Coed	Percy I. Bugbee.
Oswego	do*	Coed	James G. Riggs.
Plattsburg	State Normal School	Coed	Geo. K. Hawkins.
Potsdam	State Normal and Training School *	Coed	Jeremiah M. Thompson.
Rochester	City Normal School *	Coed	Edward J. Bonner.
Schenectady	Teachers' Training School	Coed	Granville B. Jeffers.
Syracuse	Syracuse Training School for Teachers*	Coed	J. Edward Banta.
Watertown	Watertown Training School	Coed	Ella Marie Walradt.
Yonkers	Yonkers Training School for Teachers	Coed	Eleanor M. Taylor.
NORTH CAROLINA.			
Cullowhee	Cullowhee Normal and Industrial School.	Coed	A. C. Reynolds.
Elizabeth City	State Colored Normal School	Coed	P. W. Moore.
Fayetteville	do	Coed	E. E. Smith.
Greenville	East Carolina Teachers' Training School.	Coed	Robt. H. Wright.
Greensboro	State Normal and Industrial College	Women	Julius I. Foust.
Pembroke	Indian Normal College	Coed	H. A. Neal.
Winston-Salem	Slater Industrial and State Normal School (colored).	Coed	S. G. Atkins.
NORTH DAKOTA.			
Ellendale	State Normal and Industrial School	Coed	Ryland M. Black.
Mayville	State Normal School	Coed	Thos. A. Hillyer.
Minot	do	Coed	A. G. Crane.
Valley City	do.*	Coed	Geo. A. McFarland.
OHIO.			
Akron	Perkins Normal School	Coed	W. J. Bankes.
Athens	State Normal College	Coed	John J. Richeson.
Bowling Green	do	Coed	Homer B. Williams.
Cleveland	Cleveland Normal Training School	Coed	Ambrose L. Suhrie.
Columbus	Columbus Normal School	Coed	Margaret W. Sutherland.
Dayton	Dayton Normal School	Coed	Grace A. Greene.
Kent	State Normal College *	Coed	John E. McGilvrey.
Oxford	Teachers College	Coed	Harvey C. Minnich.
OKLAHOMA.			
Ada	East Central State Normal School	Coed	J. M. Gordon.
Alva	Northwestern State Normal School	Coed	A. S. Faulkner.
Durant	Southeastern State Normal School	Coed	T. D. Brooks.
Edmond	Central State Normal School	Coed	J. W. Graves.
Langston	Colored Agricultural and Normal University.	Coed	John M. Marquess.
Tahlequah	Northeastern State Normal School	Coed	G. W. Gable.
Weatherford	Southwestern State Normal School	Coed	James B. Eskridge.
OREGON.			
Monmouth	State Normal School	Coed	John H. Ackerman.
PENNSYLVANIA.			
Bloomsburg	State Normal School	Coed	D. J. Waller, jr.
California	Southwestern State Normal School	Coed	Walter S. Hertzog.
Clarion	State Normal School	Coed	Clyde C. Green.
East Stroudsburg	do	Coed	E. L. Kemp.
Edinboro	State Normal School	Coed	Frank E. Baker.
Erie	Erie Normal Training School	Coed	Celestia J. Hershey.
Harrisburg	Teachers' Training School	Coed	Anne U. Wert.
Indiana	State Normal School	Coed	John A. H. Keith.
Kutztown	Keystone State Normal School	Coed	A. C. Rothermel.
Lock Haven	Central State Normal School *	Coed	Charles Lose.
Mansfield	State Normal School	Coed	Wm. R. Straughn.
Millersville	do	Coed	C. H. Gordinier.
Philadelphia	Philadelphia Normal School for Girls *	Women.	J. Eugene Baker.
Do	Philadelphia School of Pedagogy	Men	Francis B. Brandt.
Shippensburg	Cumberland Valley State Normal School	Coed	Ezra Lehman.
Slippery Rock	State Normal School	Coed	J. Linwood Eisenberg.
West Chester	do	Coed	George M. Philips.

XXIII.—PRINCIPALS OF NORMAL AND KINDERGARTEN TRAINING SCHOOLS—Cont

1. PUBLIC NORMAL SCHOOLS—Continued.

Location.	Name of institution.	For men, for women, or coeducational.	Principal.
RHODE ISLAND.			
Providence	Rhode Island State Normal School*	Coed	John L. Alger.
SOUTH CAROLINA.			
Orangeburg	Colored Normal, Industrial, Agricultural, and Mechanical College of South Carolina.	Coed	Robert S. Wilkinson.
Rockhill	Winthrop Normal and Industrial College*	Women	David B. Johnson.
SOUTH DAKOTA.			
Aberdeen	Northern Normal and Industrial School	Coed	Ethelbert C. Woodburn
Madison	State Normal School*	Coed	John W. Heston.
Spearfish	do	Coed	Fayette L. Cook.
Springfield	do	Coed	Gustav G. Wenzlaff.
TENNESSEE.			
Johnson City	East Tennessee State Normal School	Coed	Sidney G. Gilbreath.
Memphis	West Tennessee State Normal School	Coed	A. A. Kincannon.
Murfreesboro	Middle Tennessee State Normal School	Coed	R. L. Jones.
Nashville	State Agricultural and Industrial Normal School for Negroes.	Coed	William J. Hale.
TEXAS.			
Canyon	West Texas State Normal College	Coed	R. B. Cousins.
Commerce	East Texas Normal College	Coed	R. B. Binnion.
Denton	North Texas State Normal College	Coed	W. H. Bruce.
Huntsville	Sam Houston State Normal Institute*	Coed	H. F. Estill.
Prairie View	Prairie View State Normal and Industrial College (colored).	Coed	J. G. Osborne, acting.
San Marcos	Southwest Texas State Normal School	Coed	C. E. Evans.
VERMONT.			
Castleton	State Normal School	Coed	Charles A. Adams.
Johnson	do	Coed	Bessie B. Goodrich.
VIRGINIA.			
East Radford	State Normal School for Women	Women	John P. McConnell.
Farmville	do.*	Women	Joseph L. Jarman.
Fredericksburg	State Nornaml and Industrial School for Women.	Women	E. H. Russell.
Hampton	Hampton Normal and Agricultural Institute (colored).	Coed	James E. Gregg.
Harrisonburg	State Normal and Industrial School for Women.*	Women	Julian A. Burruss.
Petersburg	Virginia Normal and Industrial Institute (colored).	Coed	John M. Gandy.
WASHINGTON.			
Bellingham	State Normal School	Coed	George W. Nash.
Cheney	do	Coed	Noah D. Showalter.
Ellensburg	do.*	Coed	George H. Black.
WEST VIRGINIA.			
Athens	Concord State Normal School	Coed	L. B. Hill.
Fairmont	State Normal School	Coed	Joseph Rosier.
Glenville	do	Coed	E. G. Rohrbough.
Huntington	Marshall College, State Normal School	Coed	O. I. Woodley.
Institute	West Virginia Collegiate Institute (colored).	Coed	Byrd Prillerman.
Shepherdstown	Shepherd College, State Normal School	Coed	Thomas C. Miller.
West Liberty	State Normal School	Coed	John C. Shaw.
WISCONSIN.			
Algoma	Door-Kewaunee County Training School	Coed	Millard Tufts.
Alma	Buffalo County Training School	Coed	B. F. Oltman.
Antigo	Langlade County Training School	Coed	W. E. Smith.
Berlin	Green Lake County Training School	Coed	C. D. Lamberton
Columbus	Columbia County Training School	Coed	M. C. Palmer.
Eau Claire	Eau Claire County Training School	Coed	F. E. Jaastad.
Do	State Normal School	Coed	Harvey A. Schofield.
Gays Mills	Crawford County Training School	Coed	B. W. Weenink.
Grand Rapids	Wood County Training School	Coed	M. H. Jackson.
Janesville	Rock County Training School	Coed	Grank J. Lowth.
La Crosse	State Normal School	Coed	Fassett A. Cotton.
Ladysmith	Rusk County Training School	Coed	B. Mack Dresden.

PRINCIPALS OF NORMAL AND KINDERGARTEN TRAINING SCHOOLS—Contd.

1. PUBLIC NORMAL SCHOOLS—Continued.

ion.	Name of institution	For men, for women, or coeducational.	Principal.
continued.			
	Manitowoc County Training School	Coed	Fred Christiansen.
	Marinette County Training School	Coed	A. M. Olson.
	Taylor County Training School	Coed	J. H. Wheelock.
	Dunn County Training School	Coed	G. L. Bowman.
	Stout Institute	Coed	L. D. Harvey.
	Lincoln County Training School	Coed	E. W. McCrary.
	State Normal School *	Coed	Carroll G. Pearse.
	Green County Training School	Coed	C. H. Deitz.
	Waupaca County Training School	Coed	Ellis Calef.
	State Normal School	Coed	H. A. Brown.
	Price County Training School	Coed	William Milne.
	State Normal School	Coed	Asa M. Royce.
	Sauk County Training School	Coed	Martin Stenerson.
	Oneida County Training School	Coed	M. V. Boyce.
	Barren County Training School	Coed	G. E. Pratt.
ter	Richland County Training School	Coed	L. C. Johnson.
	State Normal School	Coed	Jesse H. Ames
ls	Polk County Training School	Coed	C. L. Hill.
una	Outagamie County Training School	Coed	John F. Hale.
t	State Normal School	Coed	John F. Sims.
	State Normal School *	Coed	V. E. McCaskill.
	Vernon County Training School	Coed	A. E. Smith.
	Marathon County Training School	Coed	Randall Johnson.
	Waushara County Training School	Coed	G. E. Dafoe.
	State Normal School	Coed	Albert H. Yoder.

2. PRIVATE NORMAL SCHOOLS.

rk	Pea Ridge Masonic College	Coed	A. Carnahan.
	Denver Normal and Preparatory School.	Coed	M. F. Miller.
Conn	New Haven Normal School of Gymnastics.	Coed	Ernest H. Arnold.
	American College of Physical Education.	Coed	Morey A. Wood.
	Chicago Normal School of Physical Education.	Women.	Frances Musselman.
	Technical Normal School of Chicago	Coed	L. Mary Sherwood.
l	Concordia Teachers College	Coed	W. C. Kohn.
	Tri-State College	Coed	Littleton M. Sniff.
l	Central Normal College	Coed	Jonathan Rigdon.
, Ind	Teachers College of Indianapolis	Women.	Mrs. Eliza A. Blaker.
	Normal College of the North American Gymnasium Union.	Coed	Emil Rath.
	Marion Normal Institute	Coed	C. C. Thomas.
Ky	Chandler Normal School (colored)	Coed	Frederick J. Werking.
	Kentucky Normal College	Coed	Walter M. Byington.
Md	Ammendale Normal Institute	Men	Brother Philip.
s	American School for Physical Education.	Women.	Mary R. Mulliner.
	Posse Normal School of Gymnastics	Coed	Hartvig Nissen.
	Sloyd Training School	Coed	Gustaf Larsson.
Mass	Sargent School for Physical Education	Women.	Dudley A. Sargent.
. Mich	Normal School of Physical Education	Coed	Frank J. Born.
h	Thomas Normal Training School	Coed	Jennie L. Thomas.
nn	Lutheran Normal School	Coed	K. Lokensgard.
inn	Dr. Martin Luther College	Coed	John Meyer.
br	Fremont College	Coed	W. H. Clemmons.
	Santee Normal Training School (Indian).	Coed	Frederick B. Riggs.
J	Newark Normal School for Physical Education and Hygiene.	Coed	Randall D. Warden.
C	St. Augustine's School (colored)	Coed	Edgar H. Goold.
hio	Woodville Lutheran Normal School	Coed	K. Hemminghaus.
reg	Mt. Angel Normal School	Women.	Sister Mary Rose.
	Cheyney Training School (colored)	Coed	Leslie P. Hill.
, Pa	Gratz College (Hebrew Normal)	Coed	Henry M. Speaker.
. C	Avery Normal Institute (colored)	Coed	B. F. Cox.
S. Dak	Augustana College and Lutheran Normal School.	Coed	H. S. Hilleboe.
nn	Le Moyne Normal Institute (colored)	Coed	Edgar Clippinger.
Tenn	Morristown Normal and Industrial College (colored).	Coed	Judson S. Hill.
y, W. Va	Storer College (colored)	Coed	Henry T. McDonald.
a	Greenbrier Normal School	Coed	L. O. Haynes.
Wis	National Teachers Seminary	Coed	Max Griebsch.
Wis	Catholic Normal School	Men	Joseph F. Barbian.

XXIII.—PRINCIPALS OF NORMAL AND KINDERGARTEN TRAINING SCHOOLS—Contd

3. KINDERGARTEN TRAINING SCHOOLS.

[For kindergarten departments in normal schools see names of institutions starred (*) in list 1.]

Location.	Name of institution.	Principal.
Berkeley, Cal	Barnard Kindergarten Training School	Grace Everett Barnard.
Los Angeles, Cal	Miss Fulmer's School	Grace Fulmer.
Pasadena, Cal	Broadoaks Kindergarten Training School	Ada Mae Brooks.
Greeley, Colo	Kindergarten Department, the State Teachers College.	Mildred Julian.
Bridgeport, Conn	Froebel Normal Kindergarten-Primary Training School.	Mary C. Mills.
Do	The Fannie A. Smith Froebel Kindergarten Training School.	Fannie A. Smith.
Hartford, Conn	Culver-Smith Kindergarten Training School	M. Lima Culver and Loui Smith.
Washington, D. C	Columbia Kindergarten Training School	Misses Lippincott and Bak
Do	Kindergarten Department, Howard University (colored).	Martha MacLear.
Tallahassee, Fla	Kindergarten Department, State College for Women.	Mabel Wheeler.
Atlanta, Ga	Kindergarten Department, Atlanta University (colored).	Gertrude H. Ware.
Columbus, Ga	Free Kindergarten Association Training School.	Edwina Wood.
La Grange, Ga	Kindergarten Department, Training School at La Grange Settlement.	Marguerite Murphy.
Savannah, Ga	Kate Baldwin Free Kindergarten Association Training School.	Hortense M. Orcutt.
Honolulu, Hawaii	Honolulu Free Kindergarten Training School	Frances Lawrence.
Chicago, Ill	Chicago Kindergarten Institute	Mrs. Mary B. Page.
Do	Kindergarten Department, School of Education, Chicago University.	Alice Temple.
Do	National Kindergarten and Elementary College.	Elizabeth Harrison.
Do	Pestalozzi-Froebel Kindergarten Training School.	Mrs. B. H. Hegner.
Indianapolis, Ind	The Teachers' College of Indianapolis	Mrs. Eliza A. Blaker.
South Bend, Ind	The South Bend Training School	
Cedar Falls, Iowa	Kindergarten Department, Iowa State Teachers College.	Corinne Brown.
Des Moines, Iowa	Kindergarten Department, Drake University	Irene Hirsch.
Baltimore, Md	Affordby Kindergarten Normal School	Elizabeth Silkman.
Do	Kindergarten Department, Goucher College	Stella A. McCarty.
Boston, Mass	Miss Niel's Training School for Kindergartners	Harriet Niel.
Do	The Perry Kindergarten Normal School	Mrs. Harriot H. Jones.
Do	Miss Wheelock's Kindergarten Training School.	Lucy Wheelock.
Do	Susan E. Blow Training School for Kindergartners.	Laura Fisher.
Cambridge, Mass	Lesley Normal School	Mrs. Edith L. Wolfard.
Springfield, Mass	Springfield Kindergarten Training School	Hattie Twichell.
Alma, Mich	Kindergarten Department, Alma College	Caroleen Robinson.
Big Rapids, Mich	Kindergarten Department, Ferris Institute	Flora Sawtelle.
Grand Rapids, Mich	Grand Rapids Kindergarten Training School	Clara Wheeler.
Minneapolis, Minn	Minneapolis Kindergarten Association, Normal School.	Stella L. Wood.
St. Louis, Mo	Kindergarten Training School, 5460 Delmar Blvd.	Mabel A. Wilson.
Fremont, Nebr	Kindergarten Department, Fremont College	Eva Mixer.
Lincoln, Nebr	Kindergarten Department, University of Nebraska.	Clara O. Wilson.
Omaha, Nebr	Kindergarten Department, University of Omaha.	Emma Ghering.
University Place, Nebr.	Kindergarten Department, Nebraska Wesleyan University.	Lilian Beach.
East Orange, N. J	Miss Cora Webb Peet's Kindergarten Normal Training School.	Cora Webb Peet.
Buffalo, N. Y	Kindergarten Department, Teachers Training School.	Ella C. Elder.
Herkimer, N. Y	Kindergarten Department, Folts Mission Institute.	Amy Quackenbush.
New York (Brooklyn)	Kindergarten Department, Adelphi Normal School for Kindergartners.	Anna E. Harvey.
New York, N. Y	Kindergarten Normal Department, Ethical Culture School.	Jessica E. Beers.
Do	Training School of the Froebel League	Mrs. Marion B. B. Lazettel.
Do	Jenny Hunter Kindergarten Training School	Jenny Hunter.
Do	Harriette M. Mills Kindergarten Training School.	Harriette M. Mills.
Do	Kindergarten Department, Hunter College of the City of New York.	Marie Bell Coles.
New York, N. Y	Kindergarten Department, Teachers College, Columbia University.	Patty Smith Hill.
Athens, Ohio	Kindergarten Department, Ohio University	Constance T. McLeod.
Cincinnati, Ohio	Cincinnati Kindergarten Association Training School.	Lilian H. Stone.
Do	Kindergarten Department, Cincinnati Missionary Training School.	Lottie M. Sinnett.
Cleveland, Ohio	Cleveland Kindergarten Training School	Netta Faris.
Oberlin, Ohio	Oberlin Kindergarten Training School	Clara May.

XXIII.—Principals of Normal and Kindergarten Training Schools—Contd.

3. KINDERGARTEN TRAINING SCHOOLS—Continued.

Location.	Name of institution.	Principal.
Toledo, Ohio	Law Froebel Kindergarten Training School	Mary E. Law.
Portland, Oreg	Kindergarten Department, St. Helen's Hall	Minnie M. Glidden.
Harrisburg, Pa	Froebel Kindergarten Training School	Evelyn Barrington.
Philadelphia, Pa	Miss Hart's Training School	Adelaide T. Illman.
Do	Kindergarten Department, Temple University	Lucinda P. MacKenzie.
Pittsburgh, Pa	Kindergarten Department, Training School for Teachers, Colfax School No. 1.	Alice Parker.
Do	School of Childhood, University of Pittsburgh	Meredith Smith.
Greenville, S. C	Kindergarten Department, Greenville Female College.	Kitty T. Perrin.
Dallas, Tex	Dallas Free Kindergarten Training School and Industrial Association.	Mary K. Drew.
Denton, Tex	Kindergarten Department, College of Industrial Arts.	Mabel M. Osgood.
Fort Worth, Tex	Fort Worth Kindergarten Training School	Mary G. Waite.
San Antonio, Tex	San Antonio Kindergarten Training School	Elizabeth Moore.
Provo, Utah	Kindergarten Department, Brigham Young University.	Ida S. Dusenberry.
Salt Lake City, Utah	Kindergarten Department, University of Utah	Rose Jones.
Norfolk, Va	Kindergarten Association Training School	Lilian Wadsworth.
Richmond, Va	Richmond Training School for Kindergartners[1].	Mary E. Pennell.

[1] Absorbed into Richmond City Normal Training School.

XXIV.—Vocational Education.

1. STATE OFFICIALS IN CHARGE OF VOCATIONAL EDUCATION.

States.	Division designation.	Staff.	Official position.
Alabama	State department of public instruction, Montgomery.	V. P. McKinley	State director industrial education.
		J. B. Hobdy	State supervisor agricultural education.
Arizona	State department of vocational education, Phoenix.	Isadore Colodny	State director vocational education.
Arkansas	State board of education, Little Rock.	N. M. Whaley	State director vocational agriculture.
		Connie Bonslagel	Supervisor home economics.
California	Division of vocational education, State department of public instruction, Sacramento.	Edwin R. Snyder	Commissioner of vocational education.
		J. B. Lillard	State supervisor agricultural instruction.
		J. C. Beswick	State director vocational war work.
		Charles L. Jacobs	State supervisor of teacher training for trades and industries.
		G. W. Galbraith	Do.
		W. G. Hummel	State supervisor of teacher training for agriculture.
		S. H. Dadisman	Do.
		Maude I. Murchie	State supervisor of teacher training for home economics.
Colorado	State board of agriculture, Denver.	C. G. Sargent	State director of vocational education.
Connecticut	State board of education, Hartford.	Frederick J. Trinder	State director vocational education.
		Henry C. Morrison	Assistant secretary and supervisor agricultural education.
		T. H. Eaton	Assistant supervisor agricultural education.
Delaware	State board of education, Dover.	A. R. Spaid	Commissioner.
		L. C. Armstrong	State supervisor agricultural education.
		J. T. Ryan	In charge of training teachers of trades and industries.
		H. T. Ruhl	In charge of training teachers of agriculture.
		S. Helen Bridge	In charge of training teachers of home economics.
Florida	State board of education, Tallahassee.	W. N. Sheats	State director vocational education.
		Shelton Phillips	State supervisor agricultural education.
		Edith Thomas	State supervisor home economics.

XXIV.—VOCATIONAL EDUCATION—Continued.

1. STATE OFFICIALS IN CHARGE OF VOCATIONAL EDUCATION—Continued.

States.	Division designation.	Staff.	Official position.
Georgia	State board for vocational education, Atlanta.	J. S. Stewart	Inspector vocational schools.
		E. P. Tracey	Supervisor industrial education.
		R. D. Maltby	Supervisor agricultural education.
		Eda Lord Murphy	Supervisor home economics.
		Edna M. Randall	Do.
		Julia Robertson	Do.
Hawaii	Department of public instruction, Honolulu.	Ken C. Bryan	Vocational supervisor for Oahu.
		Lester Hull	Vocational supervisor for Hawaii.
		E. Allen Creevey	Vocational supervisor for Kauai.
		R. C. Bowman	Vocational supervisor for Maui.
Idaho	State board of education, Boise.	Enoch A. Bryan	State director vocational education.
		C. B. Wilson	Supervisor agricultural education.
		Amy Kelly	Supervisor home economics.
Illinois	State board for vocational education, Springfield.	Francis W. Shepardson.	Secretary.
		E. A. Wreidt	State supervisor industrial education.
		A. W. Nolan	State supervisor agricultural education.
		Cora I. Davis	State supervisor home economics.
Indiana	State board of education, Indianapolis.	J. G. Collicott	Deputy State superintendent for vocational education.
		Z. M. Smith	Supervisor agricultural education.
		Bertha Latta	Supervisor home economics.
Iowa	State board for vocational education, Des Moines.	W. H. Bender	State director vocational education and supervisor agricultural education.
Kansas	State board of education, Topeka.	H. L. Kent	State director vocational education and supervisor agricultural education.
Kentucky	State department of education, Frankfort.	McHenry Rhoades	State director of vocational education.
Louisiana	State board of education, Baton Rouge.	P. L. Guilbeau	State supervisor of agricultural education.
		Cleora C. Helbing	State supervisor of home economics.
Maine	State board for vocational education, Augusta.	Augustus O. Thomas	Chairman and State director for vocational education.
		Paul H. Smiley	Supervisor of industrial education.
		Herbert S. Hill	Supervisor of agricultural education.
		Bernardine Cooney	Supervisor of home economics.
Maryland	State department of education, Baltimore.	G. H. Reavis	State director vocational education.
		L. A. Emerson	Supervisor industrial education
		H. F. Cotterman	Supervisor vocational agriculture.
		Agnes Saunders	Supervisor home economics.
Massachusetts	Department of vocational education, State board of education, Boston.	Robert O. Small	Deputy commissioner for vocational education.
		Charles R. Allen	Agent, industrial education.
		Rufus W. Stimson	Agent, agricultural education.
		Chester L. Pepper	Assistant agent, vocational education.
		Louisa I. Pryor	Agent, girls' home-making and trade schools.
		Caroline E. Nourse	Assistant agent, in charge of evening practical arts work.
		M. Norcross Stratton	In charge of training teachers of trades and industries.
		Franklin E. Heald	In charge of training agricultural teachers.
		Anna M. Kloss	In charge of training household arts teachers.
		Anna C. Hanrihan	Assistant in charge of training household arts teachers.

XXIV.—Vocational Education—Continued.

1. STATE OFFICIALS IN CHARGE OF VOCATIONAL EDUCATION—Continued.

States.	Division designation.	Staff.	Official position.
Michigan	State board for vocational education, Lansing.	George W. Myers	State supervisor industrial education.
		E. E. Gallup	Supervisor agricultural education.
		Martha H. French	Supervisor home economics.
Minnesota	State high school board, St. Paul.	E. M. Phillips	State director vocational education.
		G. A. McGarvey	Supervisor industrial education.
		B. M. Gile	Supervisor agricultural education.
		Mildred Weigley	Supervisor home economics.
Mississippi	State board for vocational education, Jackson.	F. J. Hubbard	Director vocational agricultural education
		S. J. Greer	Assistant director vocational agricultural education
Missouri	State board of education, Jefferson City.	J. D. Elliff	State director vocational education and supervisor agricultural education
Montana	State board of education, Helena.	L. R. Foote	State supervisor industrial education.
		M. J. Abbey	Supervisor agricultural education.
		Lucile Reynolds	Home demonstration agent.
Nebraska	State board for vocational education, Lincoln.	C. A. Fulmer	State director vocational education.
		C. W. Watson	Supervisor agricultural education.
		Alice M. Loomis	Supervisor home economics.
Nevada	State board of education, Carson City.	Leslie E. Brigham	State director vocational education
New Hampshire	State board for vocational education, Concord.	George H. Whitcher	Deputy State superintendent for vocational education
New Jersey	Division of vocational education, State department public instruction, Trenton	Wesley A. O'Leary	Assistant commissioner of education
		Arthur K. Getman	Assistant for agricultural education.
		J. Gould Spofford	Assistant for training of teachers.
		Iris Prouty O'Leary	Assistant for home economics.
New Mexico	Division of vocational education, State department of education, Santa Fe	Mrs. Ruth C. Miller	State director vocational education and supervisor home economics.
		A. B. Anderson	Supervisor industrial education.
		E. D. Smith	Supervisor agricultural education.
New York	Division of agricultural and industrial education, State department of education, Albany.	Lewis A. Wilson	Director of division.
		Royal B. Farnum	Specialist in industrial education.
		Arthur K. Getman	Specialist in agricultural education.
		Carl E. Ladd	Do.
		Arthur P. Williams	Do.
		Leon L. Winslow	Specialist in drawing and industrial training.
		Eleanor D. Toaz	Specialist in vocational education for girls.
North Carolina	State board for vocational education, Raleigh.	T. E. Browne	State director vocational education
		Minnie L. Jamison	Supervisor home economics.
North Dakota	State department of public instruction, Bismarck.	N. C. Macdonald	State superintendent
Ohio	State board of education, Columbus.	E. L. Heusch	State director vocational education.
		Dean Alfred Vivian	Supervisor agricultural education.
		W. F. Stewart	Assistant supervisor agricultural education.
		Mrs. Maud G. Adams	Supervisor home economics.
Oklahoma	State board of education, Oklahoma.	S. M. Barrett	Secretary and State director vocational education.
		W. R. Curry	State supervisor agricultural education.
		Avis Guinn	State supervisor home economics.
Oregon	State board of education, Salem	J. A. Churchill	State director vocational education.
		Frank H. Sheperd	State supervisor industrial education.

XXIV.—Vocational Education—Continued.

1. STATE OFFICIALS IN CHARGE OF VOCATIONAL EDUCATION—Continued.

States.	Division designation.	Staff.	Official position.
Oregon (Continued.)	State board of education, Salem.	H. P. Barrows	State supervisor agricultural education.
		Hattie Dahlberg	State supervisor home economics.
Pennsylvania	Vocational division, State board of education, Harrisburg.	Millard B. King	State director industrial education.
		William P. Loomis	Supervisor industrial education.
		Wallace E. Hackett	Do.
		J. K. Bowman	Do.
		Lindley H. Dennis	State director agricultural education.
		H. C. Fetterolf	Supervisor agricultural education.
		Miss Anna G. Green	Supervisor home economics.
		Anne C. Perry	Do.
Philippine Islands.	Bureau of Education, Manila	W. W. Marquardt	Director of education.
		H. F. Cutler	Chief of industrial division.
		S. J. Rowland	Assistant chief.
		North H. Foreman	Inspector of school gardens and grounds.
Porto Rico	Division of education, San Juan.		Supervisor of manual arts.
		Grace J. Ferguson	Supervisor of home economics.
		A. J. Sykes	Supervisor of agriculture.
Rhode Island	State board of education, Providence.	Walter E. Ranger	State commissioner of education.
South Carolina	State board of education, Columbia.	C. S. Doggett	State supervisor industrial education.
		Verd Peterson	State supervisor agricultural education.
		Edna F. Coith	State supervisor home economics.
South Dakota	State board of education, Pierre	E. C. Stivers	State supervisor agricultural education.
		Eva R. Robinson	Supervisor of home economics.
Tennessee	State board of education, Nashville.	Albert Williams	State director vocational education.
Texas	State board of education, Austin.	N. S. Hundson	State supervisor industrial education.
		J. D. Blackwell	Supervisor agricultural education.
		R. G. Bressler	Do.
		Nina Creigler	Supervisor home economics.
Utah	State board of education, Salt Lake City.	F. W. Kirkham	State director vocational education.
		Lon J. Haddock	Supervisor industrial education.
		I. B. Ball	Supervisor agricultural education.
		Jean Cox	Supervisor home economics.
Vermont	State board of education, Montpelier.	Leon H. Beach	State director vocational education.
		H. H. Gibson	Supervisor agricultural education.
		Julia Hurd	Supervisor home economics.
Virginia	State board of education, Richmond.	Thomas D. Eason	State director vocational education.
Washington	State board of education, Seattle.	C. R. Frazier	State director of vocational education.
		H. M. Skidmore	Supervisor agricultural education.
West Virginia	State board of regents, Charleston.	J. F. Marsh	Secretary, and acting State director of vocational education.
		B. T. Leland	Supervisor industrial education.
		C. H. Winkler	Do.
		A. C. Callen	Supervisor education for miners.
		Rachel H. Colwell	Supervisor home economics.
Wisconsin	State board for vocational education, Madison.	John Callahan	Executive secretary, and State director of vocational education.
		W. S. Welles	Supervisor agricultural education.
Wyoming	State board of education, Laramie.	James R. Coxen	State director vocational education.

XXIV.—Vocational Education—Continued.

2. DIRECTORS OF TEACHER-TRAINING COURSES.

(a) *Manual Arts and Trades and Industries.*

This table contains the names of persons reported as in charge of courses for the preparation of special teachers or directors or supervisors of the manual arts, or of trades and industries.

Location.	Institution.	Director.
ALABAMA.		
Auburn	Alabama Polytechnic Institute	M. T. Fullan.
Florence	State Normal School	R. W. Sharpe.
Jacksonville	do	A. L. Young.
Livingston	do	T. B. Ray.
Montevallo	Alabama Girls' Technical Institute	
Montgomery	State Normal School for Negroes	J. W. Beverly.
Normal	Agricultural and Mechanical College for Negroes.	W. S. Buchanan.
Troy	State Normal School	W. B. Speer.
Tuscaloosa	University of Alabama	V. P. McKinley.
Tuskegee	Tuskegee Normal and Industrial Institute (colored).	R. R. Moton.
ARIZONA.		
Flagstaff	State Normal School	G. G. Morgan.
Tempe	do	A. B. Clark.
Tuscon	University of Arizona	W. W. Henley.
ARKANSAS.		
Fayetteville	University of Arkansas	H. C. Givens.
CALIFORNIA.		
Berkeley	University of California	Charles L. Jacobs.
Chico	State Normal School	Eva M. Ealand.
Fresno	do	W. B. Givens.
Los Angeles	do	G. W. Galbraith, for trades and industries.
Do	do	Harold W. Mansfield (acting), for manual training.
San Diego	do	Mary Benton.
San Francisco	California School of Mechanical Arts	George A. Merrill.
San Jose	State Normal School	William S. Marten.
Santa Barbara	State Normal School of Manual Arts and Home Economics.	N. Dana Cook.
Stanford University	Leland Stanford Junior University	E. P. Lesley.
COLORADO.		
Fort Collins	State Agricultural College	L. D. Crain.
CONNECTICUT.		
Hartford	Hillyer Institute	H. F. Stuart.
Bridgeport	State Trade Education Shop	Herbert J. Hanson.
South Manchester	do	James C. Tucker.
Storrs	Connecticut Agricultural College	Charles L. Beach.
Torrington	State Trade School	
DELAWARE.		
Newark	Delaware College	J. T. Ryan.
DISTRICT OF COLUMBIA.		
Washington	Howard University (colored)	H. D. Hatfield.
HAWAII.		
Honolulu	Territorial Normal School	Harlan V. Roberts
IDAHO.		
Albion	State Normal School	E. A. Ball.
Lewiston	do	Mary W. McGahey.
Moscow	University of Idaho	C. B. Wilson.
Pocatello	Idaho Technical Institute	A C. Gough.

XXIV.—VOCATIONAL EDUCATION—Continued.

2. DIRECTORS OF TEACHER-TRAINING COURSES—Continued.

(a) *Manual Arts and Trades and Industries*—Continued.

Location.	Institution.	Director.
ILLINOIS.		
Carbondale	Southern Illinois State Normal University	Louis C. Petersen.
Charleston	State Normal School	L. F. Ashley.
Chicago	Lewis Institute, Madison and Robey Streets	C. E. Hoyt.
Do	.....do	G. A. Ross.
Do	University of Chicago	Emory T. Filbey.
Do	Chicago Normal College	Oscar L. McMurry.
Do	Francis W. Parker School	Leonard W. Wahlstrom.
Do	Chicago Technical College	Charles W. Morey.
Decatur	James Millikin University	L. M. Cole.
DeKalb	State Normal School	Clyan H. Hall.
Macomb	.....do	E. Wayne Wetzel.
Mooseheart	Mooseheart Vocational and Industrial Institute	J. A. Rondthaler.
Normal	Illinois State Normal University	A. C. Newell.
Peoria	Bradley Polytechnic Institute	Charles A. Bennett.
Do	.....do	Albert F. Siepert.
INDIANA.		
Bloomington	Indiana State University	Edwin A. Lee.
Indianapolis	Indiana State University, 1116 Merchants Bank Building.	George F. Buxton.
La Fayette	Purdue University	G. L. Roberts.
Muncie	State Normal School (branch)	O. E. Sink.
Terre Haute	Indiana State Normal School	M. L. Laubach.
IOWA.		
Cedar Falls	State Teachers College	C. H. Bailey.
Des Moines	Des Moines College	Thomas McMillan.
Iowa City	State University of Iowa (Department of Manual Arts).	R. E. Wilcox.
Shenandoah	Western Normal College	F. G. Baker.
KANSAS.		
Emporia	State Normal College	H. H. Braucher.
Hays	Fort Hays Kansas Normal School	
Lawrence	University of Kansas	A. G. Schmad.
Manhattan	Kansas State Agricultural College	W. W. Carlson.
Pittsburg	State Manual Training Normal School	A. H. Whitesett.
KENTUCKY.		
Berea	Berea College	A. E. Gladding.
Do	.....do	A. N. May.
Frankfort	Kentucky Normal and Industrial Institute (colored).	G. P. Russell.
Lexington	University of Kentucky	Frank L. McVey.
Lincoln Ridge	Lincoln Institute of Kentucky (colored)	A. Eugene Thompson.
MAINE.		
Gorham	State Normal School	Paul H. Smiley.
Orono	State Agricultural College	Herbert S. Hill.
MARYLAND.		
College Park	State College of Agriculture	L. A. Emerson.
MASSACHUSETTS.		
Boston	Massachusetts Normal Art School	J. F. Hopkins.
Do	Franklin Union	W. B. Russell.
Cambridge	Harvard University	H. W. Holmes.
Fitchburg	State Normal School	W. B. Anthony.
MICHIGAN.		
Kalamazoo	State Normal School	M. J. Sherwood.
Mount Pleasant	.....do	O. W. Troutman.
MINNESOTA.		
Mankato	State Normal School	C. W. Coon.
Minneapolis	University of Minnesota	G. A. McGarvey.
Moorhead	State Normal School	J. W. Eck.
St. Cloud	.....do	L. A. Williams.
St. Paul	Macalester College	H. S. Alexander.
Do	University of Minnesota (College of Agriculture).	Geo. M. Brace.
St. Peter	Gustavus Adolphus College	Harry Hedberg.
Winona	State Normal School	J. H. Sandt.

XXIV.—VOCATIONAL EDUCATION—Continued.

2. DIRECTORS OF TEACHER-TRAINING COURSES—Continued.

(a) *Manual Arts and Trades and Industries*—Continued.

Location.	Institution.	Director.
MISSISSIPPI.		
Starkville	Mississippi Agricultural and Mechanical College.	J. V. Bowen.
Do	do	M. D. Broadfoot.
MISSOURI.		
Columbia	University of Missouri	Jesse H. Coursault.
Do	do	L. S. Griffith.
Do	do	William E. Roberts.
MONTANA.		
Bozeman	State College of Agriculture	J. M. Hamilton.
Do	do	R. T. Challender.
NEBRASKA		
Lincoln	University of Nebraska	C. A. Fulmer.
NEVADA.		
Reno	University of Nevada	Walter E. Clark, pres.
NEW HAMPSHIRE.		
Durham	State College of Agriculture and Mechanic Arts	R. E. Chandler.
Keene	State Normal School	C. H. C. Dudley
Plymouth	do	C. A. King.
NEW JERSEY.		
New Brunswick	State Agricultural College	C. H. Elliott.
Trenton	State Normal School	C. A. Burt.
NEW MEXICO.		
Albuquerque	Public High School	John Milne.
East Las Vegas	State Normal University	C. D. Williams
Silver City	State Normal School	
NEW YORK.		
Albany	State College for Teachers	W. H. Douglas.
Alfred	Alfred University	C. F. Binns.
Brooklyn	Pratt Institute	S. S. Edmands.
Buffalo	State Normal School	Oakley B. Furney.
New York City	Teachers College (Columbia University)	Arthur D. Dean.
Do	New York University	C. J. Pickett.
Do	Hunter College of the City of New York	M. C. W. Reid.
Oswego	State Normal School	Joseph C. Park.
Rochester	Extension Class (Buffalo State Normal School)	Oakley B. Furney.
Do	Mechanics Institute	James F. Barker.
Syracuse	Syracuse University	J. R. Sweet.
NORTH CAROLINA.		
Greensboro	State Normal College	Miss Stephens Corrick.
Raleigh	Shaw University (colored)	G. A. Edwards.
Do	St. Augustines School	J. W. Holmes.
West Raleigh	State College of Agriculture and Engineering	T. E. Browne.
NORTH DAKOTA.		
Ellendale	State Normal School	L. B. Fields.
Fargo	North Dakota Agricultural College	E. S. Keene.
Grand Forks	University of North Dakota	V. E. Sayre.
Mayville	State Normal School	H. F. Butterfield.
Minot	do	Harland W. Corzine.
Valley City	do	Frank H. Selden.
OHIO.		
Athens	Ohio University	G. E. McLaughlin.
Bowling Green	State Normal College	L. L. Winslow.
Cincinnati	University of Cincinnati	D. J. MacDonald.
Cleveland	Cleveland School of Education	A. P. Fletcher.
Columbus	Ohio State University	Eldon L. Usry.
Dayton	St. John Normal School	George Deck.
Delaware	Ohio Wesleyan University	W. G. Hormell.
Kent	State Normal College	Clinton S. Van Deusen.
Oxford	Miami University	Fred C. Whitcomb.
Toledo	Toledo University	

XXIV.—VOCATIONAL EDUCATION—Continued.

2. DIRECTORS OF TEACHER-TRAINING COURSES—Continued.

(a) *Manual Arts and Trades and Industries*—Continued.

Location.	Institution.	Director.
OREGON.		
Corvallis	Oregon Agricultural College	E. D. Ressler.
PENNSYLVANIA.		
Bloomsburg	State Normal School	C. A. Chrisman.
Edinboro	do	G. B. Frost.
Indiana	do	E. M. Jackson.
Lewisburg	Bucknell University	F. E. Burpee.
Mansfield	State Normal School	L. S. Green.
Philadelphia	Philadelphia Trades School	William C. Ashe.
Do	Temple University	C. E. Karlsen.
Do	United States Shipping Board, Emergency Fleet Corporation.	Egbert E. MacNary.
Do	University of Philadelphia	William C. Ashe.
Pittsburgh	Carnegie Institute of Technology	C. B. Connelley.
Do	University of Pittsburgh	A. S. Hurrell.
State College	Pennsylvania State College	A. C. Davis.
Williamson	Williamson Trade School	James A. Pratt.
PORTO RICO.		
Rio Piedras	Normal College	
SOUTH CAROLINA.		
Clemson College	Clemson College	C. S. Doggett.
Columbia	University of South Carolina	T. A. M. Cook.
Orangeburg	Colored Normal, Industrial, Agricultural, and Mechanical College of South Carolina.	M. F. Whittaker.
Do	do	R. S Wilkinson.
Do	Claflin University (colored)	W. W. Wilkins.
TENNESSEE.		
Johnson City	East Tennessee State Normal School	W. C. Wilson.
Knoxville	Knoxville College (colored)	G. W. Hurd.
Do	University of Tennessee	
Memphis	West Tennessee State Normal School	C. H. Wilson.
Murfreesboro	Middle Tennessee State Normal School	Clark Woodward.
Nashville	State Agricultural and Industrial Normal School for Negroes.	A. M. Meeks.
Do	do	F. B. Wilson.
Do	George Peabody College for Teachers	Robert W. Selvidge.
TEXAS.		
Austin	University of Texas	
Canyon City	State Normal College	R. A. Terrill.
College Station	Agricultural and Mechanical College of Texas	Martin L. Hays.
Commerce	East Texas State Normal College	H. H. Coxen.
Denton	College of Industrial Arts	
Do	North Texas State Normal School	Hugo J. P. Vits.
Huntsville	Sam Houston Normal Institute	Arthur B. Mays.
Prairie View	State Normal and Industrial College (colored)	T. H. Brittain.
Do	do	W. P. Terrell.
San Marcos	State Normal School	F. Fuller.
UTAH.		
Logan	State Agricultural College	F. S. Harris.
Salt Lake City	University of Utah	J. H. Tipton.
VIRGINIA.		
Hampton	Hampton Normal and Agricultural Institute (colored).	H. J. DeYarmett.
Do	do	John H. Jinks.
Williamsburg	College of William and Mary	R. M. Crawford.
WASHINGTON.		
Bellingham	State Normal School	A. Gebaroff.
Cheney	do	F. E. Barr.
Ellensburg	do	H. J. Whitney.
Seattle	University of Washington	George H. Jensen.
Do	Public School Department	R. W. Moore.

XXIV.—VOCATIONAL EDUCATION—Continued.

2. DIRECTORS OF TEACHER-TRAINING COURSES—Continued.

(a) *Manual Arts and Trades and Industries*—Continued.

Location.	Institution.	Director.
WEST VIRGINIA.		
Morgantown	West Virginia University	B. T. Leland
WISCONSIN.		
Madison	University of Wisconsin	Thomas Diamond.
Menomonie	Stout Institute	Robert H. Rodgers.
Oshkosh	State Normal School	Hans W. Schmidt.
WYOMING.		
Laramie	University of Wyoming	James R. Coxen.

(b) *Agricultural Education.*

This table contains the names of persons reported as in charge of courses for the preparation of special teachers or directors or supervisors of agricultural education.

Location.	Institution.	Director.
Auburn, Ala	Alabama Polytechnic Institute	W. C. Blasingame.
Tuskegee, Ala	Tuskegee Normal and Industrial Institute (colored).	George R. Bridgeforth.
Tucson, Ariz	University of Arizona	
Fayetteville, Ark	University of Arkansas	E. B. Mathews.
Pine Bluff, Ark	Branch Normal College (colored)	N. A. Murray.
Berkeley, Cal	University of California	S. H. Dadisman (acting).
Fresno, Cal	State Normal School	S. W. Cunningham.
Fort Collins, Colo	State Agricultural College	C. G. Sargent.
Hesperus, Colo	Fort Lewis School of Agriculture, Mechanic and Household Arts.	G. F. Snyder.
Storrs, Conn	Connecticut Agricultural College	T. H. Eaton.
Newark, Del	Delaware College	H. T. Ruhl.
Gainesville, Fla	University of Florida	
Athens, Ga	State College of Agriculture	J. T. Wheeler.
Moscow, Idaho	University of Idaho	C. B. Wilson.
Urbana, Ill	University of Illinois	A. W. Nolan.
Lafayette, Ind	Purdue University	S. S. Cromer.
Ames, Iowa	Iowa State College	G. M. Wilson.
Manhattan, Kans	State Agricultural College	E. L. Holton.
Lexington, Ky	University of Kentucky	
Baton Rouge, La	State University and Agricultural and Mechanical College.	E. J. Mathie.
Orono, Me	University of Maine	Herbert S. Hill.
College Park, Md	Maryland Agricultural College	H. F. Cotterman.
Amherst, Mass	Massachusetts Agricultural College	W. H. Hart.
East Lansing, Mich	Michigan Agricultural College	W. H. French.
St. Paul, Minn	University of Minnesota	Ashley V. Storm.
Agricultural College, Miss	Mississippi Agricultural and Mechanical College.	F. B. Meadows.
Alcorn, Miss	Agricultural and Mechanical College (colored)	P. S. Bowles.
Columbia, Mo	University of Missouri	R. H. Emberson.
Bozeman, Mont	State College of Agriculture and Mechanic Arts	M. J. Abbey.
Lincoln, Nebr	University of Nebraska	H. E. Bradford.
Reno, Nev	University of Nevada	
Durham, N. H	State College of Agriculture and Mechanic Arts	R. E. Chandler.
New Brunswick, N. J	Rutgers Scientific School	H. O. Sampson.
State College, N. Mex	State College of Agriculture and Mechanic Arts	J. M. McArthur.
Ithaca, N. Y	Cornell University	George A. Works.
New York, N. Y	Teachers' College, Columbia University	
Syracuse, N. Y	Syracuse University	G. A. Bricker.
West Raleigh, N. C	State College of Agriculture and Engineering	Leon E. Cook.
Fargo, N. Dak	State Agricultural College	
Columbus, Ohio	Ohio State University	W. F. Stewart.
Stillwater, Okla	State Agricultural and Mechanical College	George Wilson.
Corvallis, Oreg	Oregon Agricultural College	H. P. Barrows.
State College, Pa	Pennsylvania State College	T. I. Mairs.
Kingston, R. I	Rhode Island State College	
Clemson College, S. C	Clemson Agricultural College	Verd Peterson.
Brookings, S. Dak	State College of Agriculture and Mechanic Arts	E. D. Stivers.
Knoxville, Tenn	University of Tennessee	H. A. Morgan.
College Station, Tex	Agricultural and Mechanical College of Texas	M. L. Hayes.
Logan, Utah	Agricultural College of Utah	
Burlington, Vt	University of Vermont	F. B. Jenks.

XXIV.—Vocational Education—Continued.

2. DIRECTORS OF TEACHER-TRAINING COURSES—Continued.

(*b*) *Agricultural Education*—Continued.

Location.	Institution.	Director.
Blacksburg, Va.	Virginia Agricultural and Mechanical College and Polytechnic Institute.	T. D. Eason.
Hampton, Va.	Hampton Normal and Agricultural Institute (colored).	C. K. Graham.
Pullman, Wash.	State College of Washington	H. M. Skidmore.
Morgantown, W. Va.	West Virginia University	C. H. Winkler.
Madison, Wis.	University of Wisconsin	J. A. James.
Laramie, Wyo.	University of Wyoming	

(*c*) *Home economics.*

This table contains the names of persons reported by the institutions designated as in charge of courses for the preparation of special teachers of home economics.

STATE NORMAL SCHOOLS.

Location.	Institution.	Director.
ALABAMA.		
Florence	State Normal School	Corinne Neely.
ARIZONA.		
Flagstaff	Northern Arizona Normal School	Elizabeth Ryan.
Tempe	Tempe Normal School of Arizona	Winne E. Delzell.
ARKANSAS.		
Conway	State Normal School	Jessie Bourne.
CALIFORNIA.		
Chico	do	Sadie E. Stark.
Fresno	do	Mrs. Blanche W. Taft.
Los Angeles	do	Letitia Weer.
San Diego	do	Mrs. A. H. Coldwell.
San Francisco	do	Alice Spellman.
San Jose	do	Helen Mignon.
Santa Barbara	State Normal School of Manual Arts and Home Economics.	Nell A. Miller.
COLORADO.		
Gunnison	State Normal School	Faith E. Kiddoo.
GEORGIA.		
Athens	do	Edna M. Randall.
Milledgeville	Georgia Normal and Industrial College	Eda Lord Murphy.
Valdosta	Georgia State Normal College	Julia Robertson.
HAWAII.		
Honolulu	Territorial Normal School	Mrs. Jane Otremba.
IDAHO.		
Lewiston	State Normal School	Ruth Fauble.
ILLINOIS.		
Carbondale	Southern Illinois Normal University	Grace Jones.
De Kalb	Northern Illinois State Normal School	Inez Boyce.
Macomb	Western Illinois State Normal School	Eva Colby.
Normal	Illinois State Normal University	Cora I. Davis.
INDIANA.		
Terre Haute	State Normal School	Iva Rhyan.

XXIV.—VOCATIONAL EDUCATION—Continued.

2. DIRECTORS OF TEACHER-TRAINING COURSES—Continued.

(c) *Home economics*—Continued.

STATE NORMAL SCHOOLS—continued.

tion.	Institution.	Director.
NSAS.		
	....do	Elizabeth Beye.
	Fort Hays, Kan., Normal School	Elizabeth J. Agnew.
	State Manual Training Normal School	Alba Bales.
UCKY.		
een	Western State Normal School	Iva Scott.
	Eastern State Normal School	Anna Lee Davis.
SIANA.		
s	State Normal School	Margaret W. Weeks.
INE.		
l	....do	Bernardine Cooney.
HUSETTS.		
n	State Normal School	Louis A. Nicholass.
IGAN.		
	Western State Normal School	Mary Moore.
	Northern State Normal School	Della McCalhim.
	State Normal School	Mrs. Martha H. French.
ESOTA.		
	....do	Florence Aiken.
	....do	Martha L. Metcalf.
	....do	M. L. Giddings.
	....do	Harriet Folger.
SSIPPI.		
g	Mississippi Normal College	Alice C. Tolbert.
OURI.		
leau	State Normal School	Regina Friant.
	do	Bess Naylor.
	....do	Hettie M. Anthony.
	....do	Adah Lewis.
rg	....do	Nina Streeter.
TANA.		
	....do	Eureka Nitzkowski.
ASKA.		
	....do	Ethel Delzell.
	....do	Marion W. Wellers.
	....do	Mame A. Mullen.
	....do	Agnes Finnigan.
MPSHIRE.		
	....do	Mabelle Houghton.
JERSEY.		
	....do	Bernice C. Reaney.
MEXICO.		
egas	New Mexico Normal University	Bess Chappell.
	New Mexico Normal School	Myrtle D. Dean.
YORK.		
	State Normal School	Helen Coombs.

XXIV.—VOCATIONAL EDUCATION—Continued.

2. DIRECTORS OF TEACHER-TRAINING COURSES—Continued.

(c) *Home economics*—Continued.

STATE NORMAL SCHOOLS—continued.

Location.	Institution.	Director.
NORTH CAROLINA.		
Greensboro	State Normal and Industrial College	**Minnie L. Jamison.**
NORTH DAKOTA.		
Ellendale	State Normal and Industrial School	**Tilda R. Natwick.**
Valley City	State Normal School	**Fannie Sly.**
OHIO.		
Athens	State Normal College	**Mary Tough.**
Bowling Green	do	**Mary T. Chapin.**
Kent	do	**Bertha Louise Nixon.**
Oxford	Teachers' College Miami University	**Martha J. Hanna.**
OKLAHOMA.		
Alva	Northwestern State Normal School	**Sarah Crumley.**
Durant	Southeastern State Normal School	**Hallie McKinley.**
PENNSYLVANIA.		
Clarion	State Normal School	**Sara E. Nolin.**
Indiana	do	**Belle N. Rogers.**
Lock Haven	Central State Normal School	**Grace E. Rich.**
Mansfield	State Normal School	**Olive Stryker.**
SOUTH CAROLINA.		
Rock Hill	Winthrop Normal and Industrial College	**Edna Coith.**
SOUTH DAKOTA.		
Aberdeen	Northern Normal and Industrial School	**Ida L. Brooks.**
TENNESSEE.		
Johnson City	East Tennessee State Normal School	**Ada Lou Hornsby.**
Memphis	West Tennessee State Normal School	**Helen Buguo.**
Murfreesboro	Middle Tennessee State Nor School	**Maude Parlin.**
TEXAS.		
Canyon	West Texas State Normal College	**Christine N. South.**
Denton	North Texas State Normal College	**Jessie Rambo.**
Huntsville	Sam Houston Normal Institute	**Jessie Harris.**
San Marcos	Southwest Texas State Normal School	**Mrs. C. S. Smith.**
VIRGINIA.		
East Radford	State Normal School for Women	**M. Ledge Moffett.**
Farmville	do	**Lulu V. Walker.**
Fredericksburg	State Normal and Industrial School for Women	**Epsie Campbell.**
Harrisonburg	do	**S. Frances Sale.**
WASHINGTON.		
Bellingham	State Normal School	**Sarah S. Ormsby.**
Ellensburg	do	**Dorothy McFarlane.**
WISCONSIN.		
Menomonie	Stout Institute	**Daisy Kugel.**
Stevens Point	State Normal School	**Bessie M. Allen.**

XXIV.—VOCATIONAL EDUCATION—Continued.

2. DIRECTORS OF SCHOOLS IN WHICH TRADES ARE TAUGHT.

It is intended to include in this list those schools, public and private, which offer one or more day courses hich prepare students, male or female, for the mechanical trades and industries, by teaching the technic the occupation in whole or in part, with the expectation that the training given in such course shall rve to shorten the usual period of learning or apprenticeship in the occupation.

This expectation should be justified by the provision of conditions which look definitely toward this d, and should include at least the following: (a) The students should spend not less than 10 hours (60 inutes each) per week in the practical shopwork or other technical processes of the occupation; and (b) the structor should have had practical experience as a wage earner in the occupation for which he is giving struction.

Location.	Institution.	Director.
ALABAMA.		
irmingham	Central High School	J. O. Steendahl.
uskegee	Tuskegee Normal and Industrial Institute (colored), men.	Robert R. Taylor.
Do	Tuskegee Normal and Industrial Institute (colored), women.	Mrs. Booker T. Washington.
ARIZONA.		
iami	Public High School	H. E. Hendrix.
hoenix	Phoenix Union High School	Isadore Colodny.
empe	Tempe Normal School of Arizona	A. B. Clark.
inslow	Public High School	
ARKANSAS.		
ayetteville	University of Arkansas	J. C. Futrall.
earcy	Galloway College	J. M. Williams.
pielerville	New Subiaco Seminary	Ignatius Conrad.
CALIFORNIA.		
lameda	Public High School	J. E. Carpenter.
resno	Fresno High School and Junior College	W. O. Smith.
os Angeles	Hollywood High School	W. H. Snyder.
Do	Polytechnic High School	W. A. Dunn.
Do	Jefferson High School	Theo. Fulton.
Do	Lincoln High School	Ethel Percy Andrus.
Do	Manual Arts High School	A. E. Wilson.
Do	Boyle Heights Intermediate School	B. W. Reed
Do	Fourteenth Street Intermediate School	Frank A. Bouelle.
an Francisco	The California School of Mechanical Arts	George A. Merrill
Do	Wilmerding School of Industrial Arts	Do.
Do	Lux School of Industrial Training (girls)	Theresa M. Otto.
Do	Heald's Engineering School	W. L. Butler.
tockton	Public High School	F. R. Love.
COLORADO.		
Denver	School of Trades	W. C. Borst.
Hesperus	Fort Lewis School of Agriculture, Mechanic and Household Arts.	G. F. Snyder.
CONNECTICUT.		
Bridgeport	State Trade Education Shop	Herbert J. Hanson.
Danbury	State Trade School	George W. Buck.
New Britain	Vocational High School, Trade Instruction Department.	Everett D. Packard.
New Haven	Boardman Apprentice Shops	Frank R. Lawrence (acting).
Putnam	State Trade Education Shop	A. S. Boynton.
South Manchester	do	James C. Tucker.
Torrington	State Trade School	
Waterbury	Vocational High School	Harrison S. Allen.
GEORGIA.		
Brunswick	Selden Normal and Industrial Institute	H. A. Bleach.
Columbus	Industrial High School	Jas. W. Bagby.
Forsyth	Normal and Industrial School	Wm. M. Hubbard.
Fort Valley	Public High and Industrial School	H. A. Hunt.
Industrial College	Georgia State Industrial College	L. B. Thompson.
Savannah	Public High School	J. McCreary.
IDAHO.		
Boise	Public High School	Oliver O. Young.
Pocatello	do	Cyril J. Gardner.
ILLINOIS.		
Chicago	Lane Technical High School	William J. Bogan.
Do	Harrison Technical High School	Frank L. Morse.
Do	Crane Technical High School	William J. Bartholf.
Do	Flower Technical High School	Dora Wells.
Do	School for Apprentices, Lakeside Press	E. E. Sheldon.

XXIV.—VOCATIONAL EDUCATION—Continued.

3. DIRECTORS OF SCHOOLS IN WHICH TRADES ARE TAUGHT—Continued.

Location.	Institution.	Director.
ILLINOIS—continued.		
Decatur	Public High School	G. C. Kershner.
Elgin	do	W. L. Goble.
Galesburg	do	G. H. Bridge.
Moline	Moline Manual Arts School	Henry P. Corbin.
Peoria	Bradley Polytechnic Institute	Charles A. Bennett.
Do	Manual Training High School	W. W. Brown.
Rockford	Public High School	Thomas Bjorge.
Do	Rockford School of Engineering	H. A. Ta eira.
INDIANA.		
Evansville	Central High School	John H. Peters.
Do	Public High School	Do.
Fort Wayne	Fort Wayne Vocational School	Walter F. Gordon.
Do	Vocational High School	Do.
Indianapolis	Arsenal Technical Schools	M. H. Stuart.
Richmond	Public High School	Philip C. Molter.
South Bend	Vocational School	H. M. Appleman.
Terre Haute	Vocational School for Men and Boys	Herbert Briggs.
Do	Girls' Vocational School	Do.
IOWA.		
Des Moines	Public High School	R. C. Woolman.
Sioux City	do	S. H. Wood.
KANSAS.		
Pittsburg	State Manual Training Normal College	A. H. Whitesitt.
KENTUCKY.		
Louisville	Vocational School	Ethel M. Lovell.
LOUISIANA.		
New Orleans	Isidore Newman Manual Training School	J. W. Curtis.
Do	Francis T. Nicholls Industrial School for Girls	Miss Rita Johnson.
Ruston	Louisiana Industrial Institute	J. E. Keeny.
MAINE.		
Auburn	Shoe and Leather Night School	H. H. Randall.
Portland	Public High School	Stephen E. Patrick.
Rumford	Stephens High School	Garold G. Noyes.
MARYLAND.		
Hagerstown	Trades School for Boys	H. M. Lippy.
Do	Industrial School for Boys (colored)	Benjamin Smith.
Do	Industrial School for Girls (colored)	Hattie Newman.
MASSACHUSETTS.		
Boston	Franklin Union	Walter B. Russell.
Do	North Bennet Street Industrial School	George C. Greener.
Do	Wentworth Institute	Arthur L. Williston.
	Day industrial schools.	
Beverly	Industrial School for Boys	Edgar A. Winters.
Boston	Trade School for Boys	William C. Crawford.
Do	Trade School for Girls	Florence E. Leadbetter.
Cambridge	Girls' Trade School	Maude A. Deehan.
Fall River	Diman Industrial School (boys)	Hector L. Belisle.
Holyoke	Vocational School (boys)	Russell B. Leonard.
Lowell	do	Thomas F. Fisher.
New Bedford	Industrial School (boys)	Arthur S. Allen.
Newton	Vocational School (boys)	Michael W. Murray.
Northampton	Smith's Agricultural School and Northampton School of Industries.	Herbert N. Loomis.
Quincy	Industrial School (boys)	J. Gould Spofford.
Somerville	Vocational School for Boys	Harry L. Jones.
Springfield	do	George A. Burridge (acti
Westfield	Trade School (boys)	Burton A. Prince.
Worcester	do	Albert J. Jameson.
Do	Girls' Trade School	Helen R. Hildreth.

XXIV.—Vocational Education—Continued.

3. DIRECTORS OF SCHOOLS IN WHICH TRADES ARE TAUGHT—Continued.

Location.	Institution.	Director.
MICHIGAN.		
Cadillac	Public High School	Harlan A. Colburn.
Calumet	Public Vocational School	Harold Diemer.
Detroit	Cass Technical High School	E. G. Allen.
Grand Rapids	Junior High School	C. F. Switzer.
Iron Mountain	Public High School	Guy Hoadley.
Muskegon	Hackley Manual Training School	J. D. Bicknell.
Saginaw E. S	East Side Manual Training School	Howard Hollenbach.
Saginaw W. S	Arthur Hill Trade School	Chas. A. Hach.
MINNESOTA.		
Eveleth	Junior and Senior High Schools	Harry Lyons.
Minneapolis	Central High School	C. A. Zuppann.
Do	Girls' Vocational High School	Elizabeth M. Fish.
Do	The Dunwoody Institute	H. W. Kavel.
MISSOURI.		
Kansas City	Lathrop School of Mechanical Trades	M. G. Burton.
Do	Lincoln High School	W. T. White.
Do	Jane Hayes Gates Institute	Helen Gleason.
St. Joseph	Boys' Vocational School	Ralph W. Polk.
St. Louis	Central High School	Chester B. Curtis.
Do	David Ranken, Jr., School of Mechanical Trades.	Lewis Gustafson.
MONTANA.		
Glendive	Dawson County High School	R. L. Hunt.
Great Falls	Public High School	W. S. Tucker.
Kalispell	Flathead County High School	F. O. Randall.
NEBRASKA.		
Fremont	Public High School	L. C. Wicks.
Omaha	High School of Commerce	Dwight E. Porter.
NEVADA.		
Stewart	Stewart Institute (Government Indian School).	Thomas M. English.
NEW HAMPSHIRE.		
Claremont	Stevens High School	W. A. Pierce.
Concord	Public High School	Raymond P. Gilman.
Exeter	do	Ralph H. Bissell.
Milford	do	Roy Kimball.
Nashua	Quincy Street School	Ernest W. Beck.
NEW JERSEY.		
Atlantic City	State Aided Departments	Sylvester Pelton.
Bayonne	Bayonne Vocational School	Merritt W. Haynes.
Bloomfield	Essex County Vocational School for Girls	Robert O. Beebe.
Bordentown	New Jersey Manual Training and Industrial School for Colored Youth.	W. R. Valentine.
Cape May C. H	Cape May County Vocational School	Aaron W. Hand.
Franklin	Franklin Vocational School	Stephen M. Case.
Hoboken	Hoboken Industrial School	E. G. Traus.
Jersey City	Vocational Department, Public Elementary Schools.	Ernest B. Kent.
Do	Vocational Department, School No. 24, Virginia Avenue.	H. D. White.
Do	Vocational Department, School No. 25, Zabriskie Street.	A. O. Moncrief.
Do	Vocational Department, School No. 32, Coles Street.	W. A. Messler.
Do	William L. Dickinson High School, Technical and Industrial Department.	Frank E. Mathewson.
Newark	Boys' Vocational School	James E. Dougan.
Do	Central Commercial and Manual Training High School.	William Wiener.
Do	Newark Technical School	Daniel R. Hodgdon.
Do	Girls' Vocational School	Griselda Ellis.
Do	Fawcett School of Industrial Arts	Cephas I. Shirley.
New Brunswick	Middlesex County Vocational Schools	C. E. Parsil.
Minotola	Atlantic County Vocational School of Agriculture.	Francis G. Stockbridge.
Orange	Central Grammar School (Boys' Vocational Department.)	Frank Coulter.
Do	Central Grammar School (Girls' Vocational Department.)	Florine Welch.
Do	Central Vocational School	Stanley C. Dukeshire.
Perth Amboy	Middlesex County Vocational School No. 1	Floyd E. Stein.

XXIV.—Vocational Education—Continued.

3. DIRECTORS OF SCHOOLS IN WHICH TRADES ARE TAUGHT—Continued.

Location.	Institution.	Director.
NEW JERSEY—contd.		
Perth Amboy	Middlesex County Vocational School No. 2	John M. Shoe.
Trenton	State School of Industrial Arts	Frank F. Frederick.
West Orange	Essex County Vocational School for Boys	Robert O. Beebe.
NEW YORK.		
Albany	Albany Vocational School	
Brooklyn	Pratt Institute	S. S. Edmands.
Do.	Brooklyn Vocational School	
Buffalo	Black Rock Vocational School	Samuel King.
Do.	Elm Vocational School	William B. Kamprath.
Do.	Peckham Vocational School	William W. Miller.
Do.	Seneca Vocational School	Elmer S. Pierce.
Elmira	Elmira Vocational School	Clifford McNaught.
Gloversville	Gloversville Vocational School	
Jamestown	Jamestown Vocational School	
Mount Vernon	Mount Vernon Vocational School	Hugh Stewart.
New York City	Murray Hill Vocational School	George J. Loewy.
Do.	Baron de Hirsch Trade School	J. E. G. Yalden.
Do.	Boys' Vocational School	C. J. Pickett.
Do.	Cooper Union	Charles R. Richards.
Do.	Hebrew Technical Institute (boys)	E. S. Barney.
Do.	Manhattan Trade School for Girls	Fred E. Emmons.
Do.	Mechanics' Institute	Louis Rouillion.
Do.	New York Trades School	Harry V. Brill.
Rochester	Rochester Shop School	V. A. Bird.
Do.	Washington Junior High School Vocational School.	Do.
Do.	Madison Park Vocational School	Mary E. Buckley.
Troy	Troy Vocational School	F. H. Brown.
Yonkers	Saunders Trades School	Joseph J. Eaton.
NORTH CAROLINA.		
Durham	Public High School	F. H. Hallinbech.
OHIO.		
Akron	Manual Training Courses, Central High School	L. W. Mackinnon.
Do.	Manual Training Courses, South High School	C. J. Bowman.
Do.	Manual Training Courses, West High School	E. L. Martin.
Do.	Jennings School	H. R. Smith.
Alliance	Public High School	W. P. Pfouts.
Cleveland	East Technical High School	Charles H. Lake.
Do.	West Technical High School	E. W. Roshart.
Columbus	Columbus Trades School	J. C. Hambleton.
Elyria	Public High Schools	F. M. Shelton.
Fremont	do	E. W. Meyers.
Galion	do	D. E. Shaffer.
Ironton	do	C. E. McCorkle.
Piqua	do	R. M. Franz.
OKLAHOMA.		
Muskogee	Central High School	C. E. Paul.
OREGON.		
Enterprise	Public High School	R. D. McCully.
Eugene	do	Fred Chess.
Grants Pass	do	H. H. Wardrys.
Pendleton	do	H. E. Inlow.
Portland	Benson Technical High School	Charles E. Cleaveland.
Do.	Franklin High School	J. R. Byrnhold.
Do.	Girls' Polytechnic School	Anna E. Arnold.
Salem	Salem Senior High School	E. E. Bergman.
The Dalles	Public High School	H. L. Miller.
Woodburn	do	S. R. Close.
PENNSYLVANIA.		
Allentown	Public High School	Nelson A. Butz.
Bethlehem	do	Stanley A. Zweibel.
Do.	South Side High School	James R. Barton.
Dickson	Public High School	Margaret Hayes.
Easton	do	H. A. Albright.
Ellsworth	Ellsworth-Cokeburg Cooperative Industrial School.	Samuel Clark.
Erie	Central High School	E. L. Bowman.
Hazleton	Green Street School	Gary Roddy.
Homestead	C. M. Schwab Industrial School	Rodney S. Brace.

XXIV.—Vocational Education—Continued.

3. DIRECTORS OF SCHOOLS IN WHICH TRADES ARE TAUGHT—Continued.

Location.	Institution.	Director.
PENNSYLVANIA—contd.		
ohnstown	Johnstown Vocational School	Arthur F. Payne.
Lancaster	Thaddeus Stevens Industrial School	William Mellor.
Lebanon	Public High School	I. C. White.
Locust Gap	Mount Carmel Township Vocational School	P. L. Donohoe.
New Kensington	Public High School	J. A. Miller.
Philadelphia	Franklin Institute of Mechanic Arts	William H. Thorne.
Do	Philadelphia Trades School	William C. Ash.
Do	Philadelphia Textile School	E. W. France.
Pittsburgh	Carnegie Institute of Technology, School of Applied Industries.	Clifford B. Connelley.
Do	Margaret Morrison Carnegie School	Mary B. Breed.
Reading	Cedar Street Industrial School	J. Lehn Kreider.
Scranton	The O. S. Johnson School	Robert B. Keller.
Washington	Public High School	George C. Donson.
Williamson	Williamson Free School of Mechanical Trades	Harry S. Bitting.
Wilmerding	Trades School for Boys	J. A. Broadhead.
York	Public High School	Lewis G. Crater.
PORTO RICO.		
San Juan	San Juan Technical and Vocational School	Herman Hjorth.
RHODE ISLAND.		
Providence	Technical High School	Frederic W. Putnam.
Do	Rhode Island School of Design	E. G. Radeke.
SOUTH DAKOTA.		
Sioux Falls	Public High School	Paul W. Gawne.
TENNESSEE.		
Memphis	Memphis Vocational School	John W. Curtis.
TEXAS		
Arlington	Grubbs Vocational College	Frank P. Hall.
Austin	Texas School for the Blind	E. E. Bramlette.
Corsicana	Fred Douglas High School	G. W. Jackson.
El Paso	Public High School	W. A. Burk.
Port Arthur	.....do	T. A. Butler.
San Antonio	Douglass High School	Thos. P. Holley.
Do	Main Avenue High School	H. H. Ryan.
VIRGINIA.		
Hampton	Hampton Institute, Trades School (colored)	H. J. DeYarmett.
Richmond	Virginia Mechanics Institute	Frank W. Duke.
WASHINGTON.		
Everett	Public High School, Vocational School	A. A. Kester.
Pullman	State College	Frank O. Kreager.
Seattle	Broadway High School	H. W. Mulhollan.
Do	Queen Anne High School	Charles McMahney.
Do	Seattle Engineering School (Inc.)	S. V. Bryant.
Snohomish	Public High School	William Shimmin.
Spokane	North Central High School	A. H. Benefiel.
Do	Modern Automobile Schools	C. H. Messer.
Do	The Lewis and Clark High School	Claude N. Cross.
Tacoma	Lincoln High School	Charles T. Miller.
WEST VIRGINIA.		
Institute	West Virginia Collegiate Institute (colored)	Byrd Prillerman.
WISCONSIN.		
Menomonie	Stout Institute	L. D. Harvey.
Milwaukee	Boys' Technical High School	James A. Cox.
Do	Trades School for Girls	Ora Blanchard.
Appleton	Vocational School	William F. Faulkes.
Beaver Dam	.....do	John Lund.
Beloit	.....do	A. G. McCreary.
Chippewa Falls	.....do	A. B. Curtis.
Cudahy	.....do	William Rasche.
Eau Claire	.....do	Charles Beardsley.
Fond du Lac	.....do	F. L. McAleavey.
Grand Rapids	.....do	E. L. Hayward.
Green Bay	.....do	H. G. Stewart.

XXIV.—VOCATIONAL EDUCATION—Continued.

3. DIRECTORS OF SCHOOLS IN WHICH TRADES ARE TAUGHT—Continued.

Location.	Institution.	Director.
WISCONSIN—continued.		
Janesville	Vocational School	C. F. Hill.
Kenosha	do	E. F. Randall.
La Crosse	do	John B. Coleman.
Madison	do	A. W. Siemers.
Manitowoc	do	W. F. Weisend.
Marinette	do	J. E. Fults.
Marshfield	do	Roy J. Carver.
Menasha	do	S. E. Crockett.
Menomonie	do	Fred Curran.
Milwaukee	do	R. L. Cooley.
Neenah	do	Carl Christenson.
Oshkosh	do	L. P. Whitcomb.
Racine	do	T. S. Reese.
Rhinelander	do	W. P. Colburn.
Sheboygan	do	L. R. Evans.
South Milwaukee	do	Elsie Sydow.
Stevens Point	do	G. H. Ehart.
Superior	do	J. W. Paul.
Two Rivers	do	W. T. Darling.
Wausau	do	C. O. Mulder.
Waukesha	do	G. F. Loomis.
West Allis	do	L. A. Crocker.
WYOMING.		
Douglas	Converse County High School	O. C. Swering.
Lander	Fremont County Vocational High School	J. A. Raitt.

4. DIRECTORS OF TRADE CONTINUATION SCHOOLS.

It is intended to include in this list those schools, public and private, which offer one or more courses day or evening, for the benefit of students, male or female, who seek, by means of these courses, to prepare themselves for useful employment or for promotion in their present employment, including schools offering cooperative or part-time classes, in which employed persons attend school a certain number of hours per week during working hours, or alternate between school and employment.

Location.	Institution.	Director.
ARIZONA.		
Phoenix	Union High School	Isadore Colodny.
Winslow	Continuation School	Clara L. Alden.
CALIFORNIA.		
Los Angeles	Jefferson High School	Theo. Fulton.
Do	Lincoln High School	Ethel Percy Andrus.
Stockton	Public Evening High School	Noel H. Garrison.
COLORADO.		
Denver	Evening Vocational High School	John B. Garvin.
CONNECTICUT.		
Hartford	Continuation School	William C. Holden.
New Britain	Vocational High School	Everett D. Packard.
New Haven	Boardman Apprentice Shops	Frank R. Lawrence.
Putnam	Putnam Trade School	A. S. Boynton.
Do	Public High School	Edward H. Snow.
Southington	Continuation School	R. D. Decormier.
Waterbury	do	J. D. MacDonald.
Do	Continuation School for Machine-Shop Apprentices.	John J. O'Donnell.
DISTRICT OF COLUMBIA.		
Washington	Central High School	E. W. Lawrence.
GEORGIA.		
Savannah	Public High School	Charles M. Gray.
IDAHO.		
Pocatello	Public High School (cooperative course)	Walter R. Siders.

XXIV.—Vocational Education—Continued.

4. DIRECTORS OF TRADE CONTINUATION SCHOOLS—Continued.

Location.	Institution.	Director.
ILLINOIS.		
Chicago	Commercial Continuation School, 210 West Wabash Avenue.	William A. Allen.
Do.	Lane Technical High School	William J. Bogan.
Do.	Harrison Technical High School	Frank L. Morse.
Do.	Crane Technical High School	William J. Bartholf.
La Salle	La Salle-Peru Township High School	T. J. McCormack.
Moline	Continuation School	Truman N. Jones.
Rockford	do	H. A. Taveiva.
INDIANA.		
Evansville	Central High School	John H. Peters.
Do.	Public Evening High School	John Peters.
Fort Wayne	Fort Wayne Vocational School	Walter E. Gordon.
Do.	Continuation School	Do.
Richmond	Public High School	Philip C. Molter.
South Bend	Continuation School	H. M. Appleman.
Terre Haute	Vocational School for Men and Boys	Herbert Briggs.
KENTUCKY.		
Louisville	Continuation School for Girls	Ethel M. Lovell.
LOUISIANA.		
New Orleans	T. T. Nicholls Industrial School for Girls	Rita Johnson.
MAINE.		
Auburn	Shoe and Leather Night School	H. H. Randall.
Bath	Bailey Industrial Evening School	Charles H. Watson.
Portland	Public High School	Stephen E. Patrick.
MARYLAND.		
Frederick	Night School for Boys	Roger Harley.
Do.	Night School for Girls	Edith Thomas.
MASSACHUSETTS.		
Attleboro	Evening Industrial School (men)	Lewis A. Fales.
Beverly	do	Edgar A. Winters.
Boston	Continuation School	Owen D. Evans.
Do.	Evening Trade School (men)	William C. Crawford.
Do.	North Bennet Street Industrial School	George C. Greener.
Do.	Trade School for Girls	Florence E. Leadbetter.
Cambridge	Evening Industrial School (men)	Charles M. Herlihy.
Chicopee	do	John C. Gray.
Everett	do	J. Henry Clagg.
Fall River	do	Hector L. Belisle.
Framingham	do	Ernest W. Fellows.
Holyoke	Evening Vocational School (men)	Russell B. Leonard.
Lawrence	Evening Industrial School (men)	Timothy J. Doyle.
Lowell	Evening Vocational School (men)	Thomas F. Fisher.
New Bedford	Evening Industrial School (men)	Arthur S. Allen.
Newton	Evening Vocational School (men)	Michael W. Murray.
North Attleboro	Evening Industrial School (men)	Robert J. Fuller.
Quincy	do	Albert J. Barbour.
Somerville	Evening Vocational School (men)	Harry L. Jones.
Springfield	do	George A. Burridge (acting).
Taunton	Evening Industrial School (men)	Henry W. Harrub.
Waltham	do	William D. Parkinson.
Westfield	Evening Trade School (men)	Burton A. Prince.
Worcester	do	Albert J. Jameson.
MICHIGAN.		
Calumet	Public Vocational School	Harold Diemer.
Detroit	Cass Technical High Continuation School	E. G. Allen.
Kalamazoo	Continuation School	C. G. Wenzel.
Lansing	Vocational Cooperative Course, Public High School.	E. M. Hall.
Do.	Public High School (cooperative course)	Do.
Saginaw West Side	Arthur Hill Trade School	Charles A. Hach.
MINNESOTA.		
Minneapolis	Central High School	C. A. Zuppann.
Do.	Dunwoody Institute School	H. W. Kavel.

XXIV.—VOCATIONAL EDUCATION—Continued.

4. DIRECTORS OF TRADE CONTINUATION SCHOOLS—Continued.

Location.	Institution.	Director.
MISSOURI.		
Kansas City	Lincoln High School	**W. T. White.**
Do	Jane Hayes Gates Institute	**Helen Gleason.**
St. Louis	Central High School	**Chester B. Curtis.**
MONTANA.		
Kalispell	Flathead County High School	**F. O. Randall.**
NEW HAMPSHIRE.		
Berlin	Burgess Memorial School	**H. L. Moore.**
NEW JERSEY.		
Bloomfield	Essex County Vocational School for Girls	**Robert O. Beebe.**
Newark	Bergen Street Evening High School	**Morris Bamberger.**
Do	East Side Evening High School	**Eli Pickwick, jr.**
Do	Evening Vocational School	**James E. Dougan.**
Do	Girls' Vocational School	**Mildred E. Dallet.**
Do	Newark Technical School	**Daniel R. Hodgdon.**
Minotola	Atlantic County Vocational School of Agriculture	**Francis G. Stockbridge.**
Paterson	Public High School (cooperative course)	**W. H. Kortright.**
Do	Public Evening High School	**John Shute.**
Perth Amboy	Middlesex County Evening Vocational School No. 2.	**John M. Shoe.**
West Orange	Essex County Vocational School	**Robert O. Beebe.**
NORTH CAROLINA.		
Durham	Public High School	**Maude F. Rogers.**
OHIO.		
Bucyrus	Part Time School	**G. F. Klinefelter.**
Cleveland	East Technical Night School	**A. R. Roethlisberger.**
Do	West Technical High School	**E. W. Boshart.**
Columbus	Trade School	**J. C. Hambleton.**
Warren	Public Evening School	**Victor Geiger.**
PENNSYLVANIA.		
Allentown	Continuation School (girls)	**Sophia Richards.**
Do	Continuation School (boys)	**R. N. Neeley.**
Avoca	Continuation School	**Veronica Boylan.**
Bangor	do	**Mrs. Adele Landis.**
Bethlehem	Public High School	**Stanley A. Zweibel.**
Do	Central Continuation School	**Martha Stroman.**
Do	Franklin Continuation School	**Maude R. Gillett.**
Boyertown	Continuation School	**Mrs. Martha P. Slonaker.**
Dickson	Washington Continuation School	**Margaret Hayes.**
Easton	Wilson Township Continuation School	**Willard Osterstock.**
Do	Public School District	**Mrs. Adeline Cobb.**
East Pittsburgh	Casino Technical Night School	**C. R. Dooley.**
Ellsworth	Ellsworth-Cokeburg Cooperative Industrial School.	**Samuel Clark.**
Erie	Continuation School	**E. L. Bowman.**
Fleetwood	do	**Lizzie A. Walmer.**
Glassport	do	**John S. Hart.**
Hazleton	do	**Gary Roddy.**
Homestead	C. M. Schwab Industrial School	**Rodney S. Brace**
Jeannett	Fourth Street Continuation School	**Earl Ramsey.**
Johnstown	Vocational Evening School	**Arthur F. Payne.**
Do	Public High School (cooperative industrial course).	Do.
Lebanon	Continuation School	**A. P. Mark.**
Atlas	Mount Carmel Township Continuation School	**P. L. Donohoe.**
Milton	Continuation School	**Carl L. Millward.**
Peckville	Blakely Boro Continuation School	**H. B. Anthony.**
Perkasie	Perkasie Borough Public School	**Mrs. Reba Moyer.**
Philadelphia	The Franklin Institute School of Mechanic Arts.	**Louis C. Robinson.**
Pittsburgh	Carnegie Institute of Technology, School of Applied Industries.	**Clifford B. Connelley.**
Reading	Continuation Schools—Junior High	**Caroline M. Reedy.**
Shamokin	McKinley Continuation School, Coal Township	**M. J. Conconnon.**
Do	Continuation School	**William F. Grow.**
Simpson	Fell Township Continuation School	**Miss Marie Mooty.**
Souderton	Continuation School	**Mrs. Reba Moyer.**
Taylor	do	**W. S. Robinson.**
Trevorton	Zesbe Township Continuation School	**John G. Forsythe.**
Hanover Township, Luzerne County.	Hanover Township Vocational Evening School	**Patrick Shovlin.**
Wilkes-Barre	Hanover Township Continuation School	**Philip J. McCabe.**

XXIV.—VOCATIONAL EDUCATION—Continued.

4. DIRECTORS OF TRADE CONTINUATION SCHOOLS—Continued.

Location.	Institution.	Director.
PENNSYLVANIA—con.		
Williamsport	Williamsport Continuation School	Mrs. Mabel C. Turner.
York	Continuation School, Market Street	Charles F. Kauffman.
Do	.....do	Blanche E. Spahr.
Do	Continuation School, Burrowes Building	W. G. Fishel.
Do	.....do	Marguerite A. Kleinfelter.
RHODE ISLAND.		
Providence	Rhode Island School of Design	E. G. Radeke.
TENNESSEE.		
Memphis	Vocational Continuation School	John W. Curtis.
TEXAS.		
Corsicana	Fred Douglas High School	G. W. Jackson.
El Paso	Public High School	J. A. Gilkey.
Port Arthur	.....do	T. A. Butler.
San Antonio	Main Avenue High School	L. W. Fox.
VERMONT.		
Springfield	Public High School (cooperative course)	W. H. Worden.
VIRGINIA.		
Newport News	Public Night School (cooperating with Newport News Shipbuilding & Dry Dock Co.).	C. Guy Via.
WASHINGTON.		
Seattle	Broadway Evening High School	A. L. Brown.
Do	Seattle Engineering School (Inc.)	S. V. Bryant.
Spokane	North Central Evening School	Ernest E. Greene.
WISCONSIN.[1]		
Menominie	Vocational School (Stout Institute)	F. L Curran.

5. CORPORATION SCHOOLS.

This list contains the names of corporations maintaining schools, educational departments, or special classes for employees. In some cases educational work has been temporarily discontinued during the war.

Location.	Corporation.	Director of educational activities.
ARIZONA.		
Prescott	A., T. & S. F. Ry. Apprentice School	C. W. Andrews.
Winslow	.....do	C. W. Smith.
CALIFORNIA.		
Bakerfield	A. T., & S. F. Ry. Apprentice School	C. W. Smith.
Needles	.....do	Do
Richmond	.....do	A. A. Klein.
Sacramento	S. P. Ry. Shop Apprentice School	George McCormick.
San Bernardino	A., T. & S. F. Ry. Apprentice School	C. B. Falkenstein.
San Francisco	S. P. Ry. Agency School	E. L. King.
Do	S. P. Ry. Examination Car	William Nichols.
Do	S. P. Ry. Office Work School	T. C. Edwards.
Do	Standard Oil Co	R. C. Warner.
Do	Wells Fargo Nevada National Bank	F. L. Lipman.
West Oakland	S. P. Ry. Dining Car Chefs' School	Allan Pollock.
COLORADO.		
Denver	Mountain States Telephone & Telegraph Co	Robert B. Bonney.
La Junta	A. T. & S. F. Ry. Apprentice School	H. D. Kistler.
Pueblo	.....do	Do.

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[1] See also list of "Vocational Schools," p. 165.

XXIV.—Vocational Education—Continued.

5. CORPORATION SCHOOLS—Continued.

Location.	Corporation.	Director of educational activities.
CONNECTICUT.		
Bridgeport	Remington Arms Union Metallic Cartridge Co	Arthur W. LeBoeuf.
Do	Bilton Machine Tool Co	A. J. Cummings.
Hartford	Pratt & Whitney Co	Ernest E. Fowler.
New Haven	Winchester Repeating Arms Co	Henry C. Link.
GEORGIA.		
Atlanta	Southern Bell Telephone & Telegraph Co	Kendall Weisiger.
ILLINOIS.		
Chicago	Addressograph Co	R. N. Fellows.
Do	Chicago Central Station Institute[1]	Ferd R. Jenkins.
Do	Lakeside Press, School for Apprentices	E. E. Sheldon.
Do	Montgomery Ward & Co	E. P. Marum.
Do	Swift & Co	I. L. Roberts.
Do	Western Electric Co	J. W. Dietz.
Do	Western Electric Co. Works Training Department.	J. J. Garvey.
Do	Western Electric Co. Installation Methods Department.	W. A. Titus.
Do	Wilson & Co	Miss Delos James.
Granite City	Commonwealth Steel Co	L. W. George.
INDIANA.		
Indianapolis	Eli Lilly & Co	W. A. Caperton.
Mishawaka	Dodge Manufacturing Co	W. L. Chandler.
IOWA.		
Clinton	Curtis Lumber & Millwork Co	E. J. Curtis.
Fort Madison	A., T. & S. F. Ry. Apprentice School	H. J. Poepsel.
KANSAS.		
Argentine	A., T. & S. F. Ry. Apprentice School	L. R. Linn.
Arkansas City	do	H. B. Gephardt.
Chanute	do	Arthur Irving.
Dodge City	do	C. J. McGregor.
Newton	do	R. E. Lewis.
Topeka	do	D. C. Davis.
Do	A., T. & S. F. Ry. System	Frank W. Thomas.
Wellington	A., T. & S. F. Ry. Apprentice School	A. C. Goodall.
MAINE.		
Bangor	Eastern Manufacturing Co	C. K. Hatfield.
MARYLAND.		
Baltimore	Consolidated Gas, Electric Light & Power Co	Douglass Burnett.
MASSACHUSETTS.		
Boston	New England Telephone & Telegraph Co	Edmund W. Longley.
Framingham	Dennison Manufacturing Co	C. E. Shaw.
MICHIGAN.		
Detroit	Burroughs Adding Machine Co, Sales Department.	C. P. Staubach.
Do	Burroughs Adding Machine Co., Manufacturing Department.	W. J. Kilpatrick.
Do	Burroughs Adding Machine Co., Service Department.	C. D. Stevens.
Do	Packard Motor Car Co., Technical Service Department.	F. C. Banks.
Do	Packard Motor Car Co., Truck Department	S. S. Merithew.
Do	Packard Motor Car Co., Motor Carriage Department.	D. C. Prentiss.
Ishpeming	Cleveland-Cliffs Iron Co	C. S. Stevenson.
Midland	Dow Chemical Co	Willis H. Clark.

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[1] Bureau of education for Commonwealth Edison Co., Federal Sign System, Illinois Northern Util Co., Middle West Utilities Co., Public Service Co., of Northern Illinois.

XXIV.—VOCATIONAL EDUCATION—Continued.

5. CORPORATION SCHOOLS—Continued.

Location.	Corporation.	Director of educational activities.
NEW JERSEY.		
Elizabethport	Singer Manufacturing Co	R. E. von Lehn.
Newark	Prudential Insurance Co. of America	Fred W. Tasney.
Passaic	Brighton Mills	Elizabeth W. McKee.
Trenton	Thomas Maddock's Sons Co	Oliver C. Short.
West Hoboken	Schwarzenbach Huber Co	H. E. Viola.
NEW MEXICO.		
Albuquerque	A., T. & S. F. Ry. Apprentice School	G. T. Peterson.
Belen	do	A. J. Nichols.
Clovis	do	D. R. Isles.
Deming	do	A. J. Nichols.
Las Vegas	do	H. P. Leister.
Raton	do	Do.
San Marcial	do	A. J. Nichols
NEW YORK.		
Buffalo	Larkin Co	H. E. Puffer.
New York City	American Hard Rubber Co	Herman L. Engstrom.
Do	American Telephone & Telegraph Co.[1]	Karl W. Waterson.
Do	Coe-Mortimer Co	Myron S. Hazen.
Do	Consolidated Gas Co. of New York	William D. Kelley.
Do	Equitable Life Assurance Society of U. S	William Alexander.
Do	W. R. Grace & Co	Paul C. Holter.
Do	Guaranty Trust Co. of New York	A. de Wilde, jr.
Do	Jones & Baker, Office Work School	Gertrude B. Thayer.
Do	Jones & Baker, School for Salesmen	P. J. Donahue.
Do	R. H. Macy & Co	A. S. Donaldson.
Do	New York Edison Co., Educational Committee	M. F. Magalhaes.
Do	New York Edison Co., Technical School	F. C. Stockwell.
Do	New York Edison Co., Accounting School	John T. Madden.
Do	New York Edison Co., Commercial Department, Bureau of Education.	F. C. Henderschott.
Do	New York Edison Co., Commercial School	E. G. Grandstaff.
Do	New York Telephone Co	J. L. Turner.
Do	Tabulating Machine Co	Pierre Bontecou.
Do	Texas Co	L. H. Canfield.
Do	Western Elecrtic Co., Engineering Department	W. E. Wickenden.
Do	Western Electric Co., General Sales Department	F. B. Gleason.
Do	Western Union Telegraph Co., Traffic Department.[2]	W. N. Fashbaugh.
Do	Western Electric Co., Technical correspondence courses.	Louis McKisick.
Niagara Falls	Spirella Co	W. W. Kincaid.
Schenectady	American Locomotive Co	Louis L. Park.
Do	General Electric Co., Educational Committee	E. B. Merriam.
OHIO.		
Akron	B. F. Goodrich Co	H. T. Waller.
Cleveland	Warner & Swasey Co	Kenneth W. Reed.
Dayton	National Cash Register Co	L. A. Lampman.
Middletown	American Rolling Mill Co	A. J. Beatty.
Youngstown	Youngstown Sheet & Tube Co	George B. Fout.
PENNSYLVANIA.		
Ambridge	American Bridge Co	J. E. Banks.
East Pittsburgh	Westinghouse Electric & Manufacturing Co., Electric Works.	C. R. Dooley.[3]
Do	Westinghouse Electric & Manufacturing Co., Machine Works.	R. F. Carey.
Do	Casino Technical Night School	C. R. Dooley.[3]
Ellsworth	Ellsworth Collieries Co	E. E. Bach.
Harrisburg	Elliott-Fisher Co	W. R. Busch.
Lester	Westinghouse Electric & Manufacturing Co	R. F. Carey.
Philadelphia	Atlantic Refining Co	John D. Gill.
Do	Bell Telephone Co. of Pennsylvania	J. C. Lynch.
Do	Central National Bank of Philadelphia	William Y. Conrad.

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[1] The American Telephone & Telegraph Co. and associated companies, comprising the Bell System, maintain training departments and schools for the vocational training of their employees in all of the important cities of the country.

[2] Western Union Telegraph Co. schools are maintained at the larger offices of the company in practically all cities of importance in the United States.

[3] Absent on leave; C. S. Coler, acting director.

XXIV.—VOCATIONAL EDUCATION—Continued.

5. CORPORATION SCHOOLS—Continued.

Location.	Corporation.	Director of educational activities.
PENNSYLVANIA—contd.		
Philadelphia	Henry Disston & Sons	A. S. Carter.
Do	Midvale Steel Co	Ed S. Cobaugh.
Pittsburgh	A. M. Byers Co	William E. Dunham.
Do	Carnegie Steel Co.[1]	John McLeod.
Do	Mesta Machine Co	Frederick W. Hyle.
Do	Pittsburgh Railways Co	Cecil G. Rice.
Do	Pressed Steel Car Co	S. F. McKee, S. J. Welch.
Do	Westinghouse Air Brake Co	R. O. Yearick.
SOUTH CAROLINA.		
Greenville	Victor-Monaghan Mills	L. P. Hollis.
TEXAS.		
Amarillo	A., T. & S. F. Ry. Apprentice School	E. W. Blinn.
Brownwood	.....do	K. L. Elliott.
Cleburne	.....do	S. D. Heyward.
Galveston	.....do	K. L. Elliott.
Silsbee	.....do	Do.
Slaton	.....do	E. W. Blinn.
Temple	.....do	K. L. Elliott.

6. SCHOOLS OF HOROLOGY.

Location.	Institution.	Director.
CALIFORNIA.		
San Francisco	Hiles Watchmaking and Engraving School, 717 Market Street.	C. O. Hiles.
INDIANA.		
Attica	De Selms Watch School, 203 Perry Street	Omar C. De Selms.
ILLINOIS.		
Chicago	Chicago School of Watchmaking, 59 East Van Buren Street.	Thomas Sweazey.
Peoria	Bradley Polytechnic Institute, School of Horology.	A. T. Westlake.
MASSACHUSETTS.		
Waltham	Waltham Horological School	Eugene H. Swain.
MINNESOTA.		
St. Paul	Stone School of Watchmaking, 597 Wabasha Street.	Fred G. Ohm.
MISSOURI.		
Kansas City	Stuhl's Institute of Watchmaking, Jewelry Manufacturing, and Engraving, Altman Building.	A. C. Stuhl.
St. Louis	St. Louis Watchmaking School, 5815 Easton Avenue.	R. Jaegermann.
PENNSYLVANIA.		
Lancaster	Bowman Technical School, Duke and Chestnut Streets.	John J. Bowman.
Do	Lancaster School of Watchmaking, Commerce Building.	G. Edward Fleisher.
Philadelphia	Philadelphia College of Horology, Broad and Somerset Streets.	Arthur T. Johnson.
WISCONSIN.		
Milwaukee	Drexler School of Watchmaking, University Building.	John Drexler.
Do	Wisconsin Institute of Horology, Stroh Building.	F. A. Thomas.

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[1] A school for salesmen is maintained at Pittsburgh; schools for apprentices at the New Castle, Duquesne, Homestead, Farrell, and Ohio works; and a school for engineering graduates at the Duquesne, Homestead, Ohio, and Edgar Thomson works.

XXV.—SUPERINTENDENTS OF SCHOOLS FOR THE BLIND.

Location.	Name of institution.	Superintendent or principal.
Talladega, Ala.	Alabama School for the Blind	F. H. Manning
Do.	Alabama School for the Negro Deaf and Blind	Do.
Little Rock, Ark.	Arkansas School for the Blind	John H. Hinemon.
Do.	Arkansas School for the Blind (colored)	Jennie C. Jackson.
Berkeley, Cal.	California School for Deaf and Blind	L. E. Milligan.
San Francisco (1526 California St.), Cal	San Francisco Association for the Blind	Ruth Quinan Marks
Colorado Springs, Colo.	Colorado School for the Deaf and the Blind	W. K. Argo.
Hartford, Conn.	Connecticut Institute for the Blind	Gordon Hicks.
Do.	Connecticut Institute for the Blind (dept. of trades)	Charles B. Fisher.
St. Augustine, Fla.	Florida School for the Deaf and the Blind	A. H. Walker.
Do.	Florida School for the Deaf and the Blind (colored).	Do.
Macon, Ga.	Georgia Academy for the Blind	G. F. Oliphant
Do.	Georgia Academy for the Blind (colored)	Do.
Gooding, Idaho	Idaho State School for the Deaf and the Blind	W. E. Taylor.
Chicago, Ill.	Chicago Public Schools for the Blind	John B. Curtis.
Jacksonville, Ill.	Illinois School for the Blind	Robert W. Woolston.
Indianapolis, Ind.	Indiana School for the Blind	George S. Wilson.
Vinton, Iowa	Iowa College for the Blind	George D. Eaton.
Kansas City, Kans.	Kansas State School for the Blind	Lee Harrison.
Louisville, Ky.	Kentucky School for the Blind	Susan B. Merwin.
Do.	Kentucky School for the Blind (colored)	Do.
Baton Rouge, La.	Louisiana State School for the Blind	W. W. Bynum.
Portland, Me.	Maine Institution for the Blind	Millard W. Baldwin.
Overlea, Md.	Maryland School for the Blind	John F. Bledsoe.
Do.	Maryland School for the Colored Blind and Deaf	Do.
Watertown, Mass.	Perkins Institution and Massachusetts School for the Blind.	Edward E. Allen.
Detroit, Mich.	Detroit Public Schools for Blind	Mildred Fletcher.
Lansing, Mich.	Michigan School for the Blind	C. E. Holmes.
Saginaw, Mich.	Michigan Employment Institution for the Blind	Frank G. Putnam.
Faribault, Minn.	Minnesota School for the Blind	James J. Dow.
Jackson, Miss.	Mississippi Institute for the Blind	R. S. Curry.
St Louis, Mo.	Missouri School for the Blind	S. M. Green.
Boulder, Mont.	Montana School for the Deaf and the Blind	H. J. Menzemer.
Nebraska City, Nebr.	Nebraska School for the Blind	N. C. Abbott.
Jersey City, N. J.	Public School Classes for Blind	W. F. Babcock.
Newark, N. J.	do	Janet G. Paterson.
Summit, N J.	International Sunshine Society, Department for the Blind (Arthur Home).	Belle Harvey.
Alamogordo, N. Mex.	New Mexico Institute for the Blind	R. R. Pratt.
Batavia, N. Y.	New York State School for the Blind	C. A. Hamilton.
Brooklyn (84th St. and 13th Ave.), N. Y.	International Sunshine Society, Department for the Blind.	Maybelle Peck.
New York (University Ave.), N. Y.	Catholic Institute for the Blind	Sister M. Bertrand.
New York, N. Y.	New York Institute for the Education of the Blind.	Edward M. Van Cleve.
Do.	Public School Classes for Blind Children	Frances E. Moscrip.
Prince Bay, N. Y.	St. Joseph's Blind Asylum	Sister M. Augustine.
Raleigh, N. C.	State School for the Blind and the Deaf	John T. Alderman.
Do.	State School for the Blind and the Deaf (colored)	A. W. Pegues.
Bathgate, N. Dak.	North Dakota School for the Blind	B. P. Chapple.
Cincinnati, Ohio	Cincinnati School for the Blind	Estella Lawes.
Cleveland, Ohio	Cleveland Public School for the Blind	R. B. Irwin.
Columbus, Ohio	Ohio State School for the Blind	Charles F. F. Campbell.
Toledo, Ohio	Toledo School for the Blind	R. B. Irwin.
Muskogee, Okla.	Oklahoma School for the Blind	O. W. Stewart.
Taft, Okla.	Institute for Deaf, Blind, and Orphans (colored)	J. R. Johnson.
Salem, Oreg.	Oregon State School for the Blind	E. T. Moores.
Overbrook, Pa.	Pennsylvania Institution for the Instruction of the Blind.	Olin H. Burritt.
Pittsburgh, Pa.	Western Pennsylvania Institution for the Blind	Thos. S. McAloney.
Cedar Springs, S. C.	South Carolina School for the Deaf and the Blind.	N. F. Walker.
Do.	South Carolina School for the Deaf and the Blind (colored).	Do.
Gary, S. Dak.	South Dakota School for the Blind	Otis O. Rule.
Nashville, Tenn.	Tennessee School for the Blind	I. S. Wampler.
Do.	Tennessee School for the Blind (colored)	Do.
Austin, Tex.	Deaf, Dumb, and Blind Institute for Colored Youths.	R. E. L. Holland.
Do.	Texas School for the Blind	E. E. Bramlette.
Ogden, Utah.	Utah School for the Blind	Frank M. Driggs.
Newport News, Va.	Virginia State School for Colored Deaf and Blind Children.	William C. Ritter.
Staunton, Va.	Virginia School for the Deaf and the Blind	W. A. Bowles.
Vancouver, Wash.	Washington State School for the Blind	Sadie E. Hall.
Romney, W. Va.	West Virginia Schools for the Deaf and the Blind.	F. L. Burdett.
Janesville, Wis.	Wisconsin School for the Blind	J. T. Hooper.
Milwaukee, Wis.	Day School for the Blind	Carrie B. Levy.
Racine, Wis.	do	Lydia E. Dunkelow.

XXVI.—Superintendents of Schools for the Deaf.

1. STATE SCHOOLS.

Location.	Name of institution.	Superintendent or principal.
Talladega, Ala	Alabama School for the Deaf	F. H. Manning.
Do	Alabama School for the Negro Deaf and Blind	Do.
Tucson, Ariz	Arizona State School for the Deaf	Howard Griffin.
Little Rock, Ark	Arkansas Deaf-Mute Institute	Thomas P. Clarke.
Do	Arkansas Deaf-Mute Institute (colored)	A. M. Martin.
Berkeley, Cal	California School for Deaf and Blind	L. E. Milligan.
Colorado Springs, Colo	Colorado School for the Deaf and the Blind	W. K. Argo.
Hartford, Conn	American School, at Hartford, for the Deaf	Frank R. Wheeler.
Mystic, Conn	Mystic Oral School for the Deaf	Clara H. McGuigan.
Washington, D. C	Columbia Institution for the Deaf	Percival Hall.
Do	Gallaudet College for the Deaf [1]	Do.
Do	Kendall School for the Deaf [1]	Lyman Steed.
St. Augustine, Fla	Florida School for the Deaf and the Blind	A. H. Walker.
Do	Florida School for the Deaf and the Blind (colored).	Do.
Cave Spring, Ga	Georgia School for the Deaf	J. C. Harris.
Do	Georgia School for the Deaf (colored)	F. M. Gordon.
Gooding, Idaho	Idaho State School for the Deaf and the Blind	W. E. Taylor.
Jacksonville, Ill	Illinois School for the Deaf	H. T. White.
Indianapolis, Ind	Indiana State School for the Deaf	R. O. Johnson.
Council Bluffs, Iowa	Iowa School for the Deaf	Henry W. Rothert.
Olathe, Kans	Kansas School for the Deaf	Kate S. Herman.
Danville, Ky	Kentucky School for the Deaf	Augustus Rogers.
Do	Kentucky School for the Deaf (colored)	Do.
Baton Rouge, La	Louisiana State School for the Deaf	G. C. Huckaby.
Portland, Me	Maine School for the Deaf	Elizabeth R. Taylor.
Frederick, Md	Maryland State School for the Deaf	Ignatius Bjorlee.
Overlea, Md	Maryland School for the Colored Blind and Deaf	John F. Bledsoe.
Beverly, Mass	New England Industrial School for Deaf Mutes	Ella S. Warner.
Northampton, Mass	Clarke School for the Deaf [2]	Caroline A. Yale.
Randolph, Mass	Boston School for the Deaf	M. J. Splaine.
Flint, Mich	Michigan School for the Deaf	Luther L. Wright.
Faribault, Minn	Minnesota School for the Deaf	James N. Tate.
Jackson, Miss	Institution for the Deaf and Dumb	Wert Scott.
Do	Institution for the Deaf and Dumb (colored)	Do.
Fulton, Mo	Missouri School for the Deaf	J. Stuart Morrison.
Do	Missouri School for the Deaf (colored)	W. C. Reid.
Boulder, Mont	Montana School for the Deaf and the Blind	H. J. Menzemer.
Omaha, Nebr	Nebraska School for the Deaf	Frank W. Booth.
Trenton, N. J	New Jersey School for the Deaf	Alvin E. Pope.
Santa Fe, N. Mex	New Mexico Asylum for the Deaf and Dumb	W. O. Conner, jr.
Albany, N. Y	Albany Home School for the Oral Instruction of the Deaf.	Quincy McGuire.
Buffalo, N. Y	Le Couteulx St. Mary's Institution for the Improved Instruction of the Deaf. [2]	Sister Mary Anne Burk
Malone, N. Y	Northern New York Institution for Deaf Mutes	Edward C. Rider.
New York (904 Lexington Ave.), N. Y.	Association for the Improved Instruction of Deaf Mutes. [2]	Harris Taylor.
New York (40–44 W. 115th St.), N. Y.	New York Evening School for the Deaf	Albert J. Amatcan.
New York (Fort Washington Ave. and W. 163d St.), N. Y.	New York Institution for the Instruction of the Deaf and Dumb.	Isaac B. Gardner.
Rochester, Y. N	Western New York Institution for Deaf Mutes	T. C. Forrester.
Rome, N. Y	Central New York Institution for Deaf Mutes	E. A. Gruver.
Westchester, N. Y	St. Joseph's Institute for the Improved Instruction of Deaf Mutes. [2]	Annie M. Larkin.
Morganton, N. C	North Carolina School for the Deaf	E. McKay Goodwin.
Raleigh, N. C	State School for the Blind and the Deaf (colored)	A. W. Pegues.
Devils Lake, N. Dak	North Dakota School for the Deaf	Frank Read, jr.
Columbus, Ohio	Ohio State School for the Deaf	J. W. Jones.
Sulphur, Okla	Oklahoma School for the Deaf	J. W. Blattner.
Taft, Okla	Institute for Deaf, Blind, and Orphans (colored)	J. R. Johnson.
Salem, Oreg	Oregon School for Deaf	E. S. Tillinghast.
Philadelphia (Belmont and Monument Aves.), Pa.	Home for the Training in Speech of Deaf Children Before They Are of School Age.	Mary S. Garrett.
Philadelphia (Mount Airy), Pa.	Pennsylvania Institution for the Deaf and Dumb.	A. L. E. Crouter.
Pittsburgh (Brookline), Pa.	De Paul Institute for Deaf Mutes [2]	Sister Mary James.
Scranton, Pa	Pennsylvania Oral School for the Deaf	Kate H. Fish.
Swissvale (Edgewood Park), Pa.	Western Pennsylvania Institution for the Instruction of the Deaf and Dumb.	Wm. N. Burt.
Providence, R. I	Rhode Island Institute for the Deaf	Anna C. Hurd.
Cedar Spring, S. C	South Carolina School for the Deaf and the Blind	N. F. Walker.
Do	South Carolina School for the Deaf and the Blind (colored).	Do.

[1] Department of Columbia Institution for the Deaf.

[2] School is under private management but receives State pupils.

XXVI.—SUPERINTENDENTS OF SCHOOLS FOR THE DEAF—Continued.

1. STATE SCHOOLS—Continued.

Location.	Name of institution.	Superintendent or principal.
Falls, S. Dak.	South Dakota School for the Deaf	Howard W. Simpson.
ville, Tenn.	Tennessee Deaf and Dumb School	H. E. Walker.
Do.	Tennessee Deaf and Dumb School (colored)	Do.
in, Tex.	Deaf, Dumb, and Blind Institute for Colored Youths.	R. E. L. Holland.
Do.	Texas School for the Deaf	G. F. Urbantke.
n, Utah	Utah School for the Deaf	Frank M. Driggs.
tleboro, Vt	Austine Institution for the Deaf and Blind	Helen G. Throckmorton.
port News, Va.	Virginia State School for Colored Deaf and Blind Children.	Wm. C. Ritter.
nton, Va	Virginia School for the Deaf and the Blind	W. A. Bowles.
ouver, Wash	State School for the Deaf	W. M. Kilpatrick.
ney, W. Va	West Virginia Schools for the Deaf and the Blind	F. L. Burdett.
van, Wis	Wisconsin State School for the Deaf	H. C. Buell.

2. PRIVATE SCHOOLS.

land, Cal.	St. Joseph's Home for Deaf Mutes	Sister M. Louis.
on, Ga	Miss Arbaugh's School for Deaf Children	Laura L. Arbaugh.
ago (40th St. and Belont Ave.), Ill.	Ephpheta School for the Deaf	Ada Potts.
chuba, La	Chinchuba Deaf-Mute Institute	Sister M. Alma.
imore (Irvington), d.	St. Francis Xavier's School for the Deaf	Sister M. Michael.
sington, Md	Home School for Little Deaf Children	Anna C. Reinhardt.
t Medford, Mass	Sarah Fuller Home for Little Deaf Children	Mary Islay Strachan.
th Detroit, Mich	Evangelical Lutheran Deaf-Mute Institute	Rev. Wm. Gielow.
in, Mo	Joplin School for Deaf	Delia C. Page.
Louis (Vandeventer e. and Westminster ace), Mo.	Central Institute for the Deaf	Ethel M. Hilliard.
ouis (901 N. Garrison e.), Mo.	St. Joseph Deaf-Mute Institute	Sister M. Borgia.
worth, N. H.	Davidson School of Individual Instruction	S. G. Davidson.
York (534 W. 187th .), N. Y.	Reno Margulies School for the Deaf	Mrs. A. Reno Margulies.
York (1 Mount orris Park W.), N. Y.	Wright Oral School	John Dutton Wright, M. A.
land, Ohio	St. Rita School for the Deaf	Rev. H. J. Waldhaus.
sdowne, Pa	Sanatorium School for Nervous, Lame, or Deaf	Claudia M. Redd.
adelphia (1803 Vine .), Pa.	Archbishop Ryan Memorial Institute for the Deaf.	Sister M. Carmelia.
Juan, Porto Rico	School for the Deaf and Dumb	Sister M. Isabel.
, S. Dak.	Black Hills School for the Deaf	Miss F. L. Willhoyte.
Francis, Wis	St. John's Institute for Deaf-Mutes	Rev. M. M. Gerend.

XXVII.—SUPERINTENDENTS OF SCHOOLS FOR THE FEEBLE-MINDED.

1. STATE SCHOOLS.

Location.	Name of institution.	Superintendent or principal.
ridge, Cal.	Sonoma State Home	F. O. Butler, M. D.
ge, Colo	State Home and Training School for Mental Defectives.	A. P. Busey, M. D.
sfield, Conn	Mansfield State Training School and Hospital	Chas. T. La Moure, M. D.
npa, Idaho	Idaho State Sanitarium	D. O. Poynter, M. D.
oln, Ill	Lincoln State School and Colony	Thos. H. Leonard, M. D.
Wayne, Ind	Indiana School for Feeble-Minded Youth	George S. Bliss, M. D.
wood, Iowa	Iowa Institution for Feeble-Minded Children	Geo. Mogridge, M. D.
sons, Kans	State Hospital for Epileptics	Miss M. Edwards.
field, Kans	State Home for Feeble-Minded	F. C. Cave, M. D.
nkfort, Ky	Kentucky Institution for Feeble-Minded Children.	S. L. Helm, M. D.
t Pownal, Me	Maine School for Feeble-Minded	Carl J. Hedin, M. D.
ngs Mills, Md	Rosewood State Training School for Feeble-Minded	Frank W. Keating, M. D
dwinsville, Mass.	Hospital Cottages for Children[1]	Harold C. Arey.
verley, Mass	Massachusetts School for the Feeble-Minded	Walter E. Fernald, M. D.
ntham, Mass	Wrentham State School	Geo. L. Wallace, M. D.
eer, Mich	Michigan Home and Training School	H. A. Haynes, M. D.
ibault, Minn.	Minnesota School for Feeble-Minded and Colony for Epileptics.	G. C. Hanna.
shall, Mo	Missouri Colony for Feeble-Minded and Epileptic.	R. P. C. Wilson, M. D.

[1] Receives epileptic children as well as other classes needing hospital treatment and care.

XXVII.—SUPERINTENDENTS OF SCHOOLS FOR THE FEEBLE-MINDED—Continued.

1. STATE SCHOOLS—Continued.

Location.	Name of institution.	Superintendent or principal.
Boulder, Mont	Montana Training School for Backward Children	**H. J. Menzemer, M. A.**
Beatrice, Nebr	Nebraska Institution for Feeble-Minded Youth	**D. G. Griffiths, M. D.**
Laconia, N. H	New Hampshire School for Feeble-Minded	**Benjamin W. Baker, M. D.**
New Lisbon, N. J	New Jersey State Colony for Feeble-minded	**J. F. Macomber.**
Skillman, N. J	New Jersey State Village for Epileptics	**David F. Weeks, M.D.**
Vineland, N. J	New Jersey State Institution for Feeble-Minded	**Madeleine A. Hallowell, M. D.**
Do	Training School at Vineland N. J	**E. R. Johnstone.**
Newark, N. Y	New York State Custodial Asylum	**Ethan A. Nevin, M. D.**
New York (Randalls Island), N. Y.	New York City Children's Hospitals and Schools	**Wm. B. Cornell, M. D.**
Rome, N. Y	Rome State Custodial Asylum	**Charles Bernstein, M. D.**
Sonyea, N. Y	Craig Colony for Epileptics	**Maude O. Weller.**
Syracuse, N. Y	Syracuse State Institution for Feeble-Minded Children.	**O. H. Cobb, M. D.**
Thiells, N. Y	Letchworth Village	**Charles S. Little, M. D.**
Kinston, N. C	Caswell Training School	**C. Banks McNairy, M.D**
Grafton, N. Dak	Institution for Feeble-Minded	**A. R. S. Wylie, M. D.**
Columbus, Ohio	do	**E. J. Emerick, M. D.**
Enid, Okla	do	**Wm. L. Kendall, M. D.**
Salem, Oreg	State Institution for Feeble-Minded	**J. N. Smith, M. D.**
Elwyn, Pa	Pennsylvania Training School for Feeble-Minded Children.	**Martin W. Barr, M. D.**
Pennhurst, Pa	Eastern Pennsylvania State Institution for Feeble-Minded and Epileptic.	**Oscar E. Thomson.**
Polk, Pa	State Institution for Feeble-Minded of Western Pennsylvania.	**J. M. Murdoch, M. D.**
Slocum, R. I	Exeter School	**Joseph H. Ladd, M. D.**
Redfield, S. Dak	State School and Home for Feeble-Minded	**J. K. Kutnewsky.**
Austin, Tex	State Colony for the Feeble-Minded	**J. W. Bradfield.**
Provo, Utah	State Mental Hospital: Department for Feeble-Minded.	**G. E. Hyde, M. D.**
Brandon, Vt	Vermont State School for Feeble-Minded Children	**F. J. Russell, M. D.**
Madison Heights, Va	Virginia Epileptic Colony	**A. S. Priddy, M. D.**
Medical Lake, Wash	State Institution for Feeble-Minded	**S. C. Woodruff.**
Chippewa Falls, Wis	Wisconsin Home for Feeble-Minded	**Alfred W. Wilmarth, M. D.**
Lander, Wyo	Wyoming School for Defectives	**Charles E. Lane, M. D.**

2. PRIVATE SCHOOLS.

Godfrey, Ill	"Beverly Farm" Home and School for Nervous and Backward Children.	**Wm. H. C. Smith, M.D.**
Streator, Ill	Cottage School for Retarded Children	**Frances R. Fletcher.**
Wheaton, Ill	Highland Heath	**Mary E. Pogue, M. D.**
Red Oak, Iowa	Powell School for Backward and Mentally Deficient Children.	**Velura E. Powell, M. D.**
Farmdale, Ky	Stewart Home and School	**John P. Stewart, M. D.**
Catonsville, Md	Mount Herbert Private School for Feeble-Minded	**Samuel J. Fort, M. D.**
Amherst, Mass	Home School for Backward Children and Youth	**Frances J. Herrick.**
Barre, Mass	"Elm Hill" Private Home and School for Feeble-Minded.	**George A. Brown, M. D.** **George P. Brown, M. D.**
Boston (80 Hammond St.), Mass.	Residence School for Special Children	**Elizabeth L. Moulton.**
Halifax, Mass	Standish Manor School	**Ellen C. Dresser.**
Detroit, Mich	Reed School for Nervous and Backward Children	**Mrs. Frank A. Reed.**
Kalamazoo (Comstock P. O.), Mich.	St. Anthony's School for Feeble-Minded and Backward Children.	**Sister M. Vincent.**
Kalamazoo, Mich	Wilbur Home and School for Backward and Mentally Defective Children.	**Joseph W. Wilbur.**
Northfield, Minn	Baker School	**Laura B. Baker.**
St. Louis (3809 Flad Ave.), Mo.	Miss Compton's School for Children of Retarded Mentality.	**Fanny A. Compton.**
Cranbury, N. J	"The Larches" Educational Sanitarium for Mental Defectives.	**Elise Gordon.**
Haddonfield, N. J	Bancroft Training School	**E. A. Farrington, M. D.**
Orange, N. J	Seguin School for Children Who Deviate from the Normal.	**Elsie M. Seguin.**
South Orange, N. J	School for Individual Teaching	**Charlotte H. Miner.**
Amityville, N. Y	Brunswick Home for Idiotic, Epileptic, Paralytic, and Feeble-Minded Children.	**C. L. Markham, M. D.**
Binghamton, N. Y	Binghamton Training School	**A. A. Boldt.**
Camillus, N. Y	Hill Crest School	**A. Cora Harman.**
Newburgh, N. Y	Sycamore Farm Home School	**N. R. Brewster.**

XVII.—SUPERINTENDENTS OF SCHOOLS FOR THE FEEBLE-MINDED—Continued.

2. PRIVATE SCHOOLS—Continued.

Location.	Name of institution.	Superintendent or principal.
ew York (238th St. and Riverdale Ave.), N. Y.	Florence Nightingale School for Nervous and Backward Children.	Rudolph S. Fried.
ittsford, N. Y	Frances School	Mabel A. Taylor. Harriett C. Neafie.
ort Jefferson, N. Y	Brooklyn Home for Blind, Crippled, and Defective Children.	Sister Teresa.
aratoga Springs, N. Y	Miss Copeland's School for Mentally Deficient Children.	Susan E. Copeland.
alden, N. Y	Goodale Manor School	Mary P. Williams.
hite Plains, N. Y	St. Agnes Hospital	Sister M. Francis.
arietta, Ohio	Riverview School	Mary Merydith.
erwyn (The Maples), Pa.	Latshaw School	Allen Latshaw.
ansdowne, Pa	Brookwood School for Nervous and Backward Children.	Rachel W. Brewster.
hiladelphia (Holmesburg), Pa.	Biddle School for Nervous and Backward Children.	Grace Biddle de Quelin
hiladelphia (3412 Sansom St.), Pa.	Latshaw School	Allen Latshaw.
oslyn, Pa	Miss Woods' School for Exceptional Children	Mollie A. Woods.
haron Hill, Pa	Miss McGrew's School for Boys of Defective Mentality.	Anna L. McGrew.
urfreesboro, Tenn	Bristol-Nelson Physiological School for Nervous and Backward Children.	Cora Bristol-Nelson.
ustin, Tex	Texas Training School for Defectives and Sanitarium for Mental and Nervous Diseases.	T. O. Maxwell, M. D.
alls Church, Va	Gundry Home and Training School for Feeble-Minded and Epileptics.	Mattie Gundry.
ichmond, Va	Home Place School	Alice C. Hinckley.
efferson, Wis	St. Coletta Institute	Sister M. Emerentia.
atertown, Wis	Evangelical Lutheran Home for Feeble-Minded and Epileptics.	H. C. Zaus.

XXVIII.—SUMMER SCHOOL DIRECTORS.

PART 1.—UNIVERSITIES, COLLEGES, AND NORMAL SCHOOLS.

Location.	Summer school.	Director in 1918.	Session of 1918.	
			Opening.	Close.
ALABAMA.				
uburn	Alabama Polytechnic Institute	Zebulon Judd	June 3	July 12
irmingham	Howard College	John C. Dawson	..do	Do.
aphne	State Normal School	H. H. Holmes	June 4	July 17
lorence	..do	H. J. Willingham	May 28	Aug. 9
acksonville	..do	C. W. Daugette	May 27	Aug. 16
ivingston	..do	George W. Brock	June 3	Aug. 16
ontgomery	State Colored Normal School	J. W. Beverly	..do	July 12
ormal	Agricultural and Mechanical College for Negroes.	Walter S. Buchanan	June 10	July 19
roy	State Normal School	Edward M. Shackelford.	May 28	Aug. 9
uskegee	Tuskegee Institute	Ezra C. Roberts	June 10	July 19
niversity	University of Alabama	James J. Doster	June 6	July 17
ARIZONA.				
lagstaff	Northern Arizona Normal School	R. H. H. Blome	June 17	Aug. 9
ARKANSAS.				
onway	Arkansas State Normal School	B. W. Torreyson	June 3	July 26
ayetteville	University of Arkansas	James R. Jewell	June 17	July 27
CALIFORNIA.				
rcata	Humboldt State Normal School	N. B. Van Matre	June 24	Aug. 23
erkeley	University of California	Walter M. Hart	..do	Aug. 3
untington Lake.	Sierra Summer School (Fresno State Normal School).	W. B. Givens	July 1	Aug. 9
os Angeles	University of California (Southern Division).	Monroe E. Deutsch	June 24	Aug. 3
Do	University of Southern California	Thomas B. Stowell	..do	Do.

XXVIII.—SUMMER SCHOOL DIRECTORS—Continued.

PART 1.—UNIVERSITIES, COLLEGES, AND NORMAL SCHOOLS—Continued.

Location.	Summer school.	Director in 1918.	Session of 1918.	
			Opening.	Close.
CALIFORNIA—con.				
Pacific Grove	Hopkins Marine Station (Leland Stanford Junior University).	Walter K. Fisher	June 18	Aug. 30
San Diego	State Normal School	Edward L. Hardy	July 1	Aug. 9
Santa Barbara	State Normal School of Manual Arts and Home Economics.	Mary H. Tracy	June 24	Aug. 30
Stanford University.	Leland Stanford Junior University	Ray L. Wilbur	June 18	Aug. 31
Swanton	Camp California Summer School of Surveying (University of California).	Francis S. Foote, jr	May 16	June 15
COLORADO.				
Boulder	University of Colorado	Milo G. Derham	June 24	Aug. 3
Denver	Denver Normal and Preparatory School.	M. F. Miller	June 10	Do.
Do	Graduate courses in Ophthalmology (University of Colorado).	Edward Jackson	June 24	Do.
Fort Collins	Colorado Agricultural College	S. Arthur Johnson	June 3	July 12
Greeley	Colorado State Teachers College	John G. Crabbe	June 17	Aug. 23
Gunnison	Colorado State Normal School	James H. Kelley	do	July 26
Tolland	School of Mountain Field Biology (University of Colorado).	Francis Ramaley	June 24	Aug. 3
University Park	University of Denver	Wilber D. Engle	June 17	Aug. 23
Woodland Park	Summer School of Surveying (Colorado College).	Frank M. Okey	May 15	June 15
CONNECTICUT.				
Danbury	State Normal School	J. R. Perkins	July 9	Aug. 17
New Haven	New Haven Normal School of Gymnastics.	E. H. Arnold	July 29	Aug. 21
DELAWARE.				
Newark	Delaware College	George S. Counts	July 8	Aug. 16
DISTRICT OF COLUMBIA.				
Washington	Catholic Sisters College	Thomas E. Shields	June 28	Aug. 7
Do	George Washington University	William C. Ruediger	June 22	Aug. 3
Do	National University Law School	Charles F. Cartisi	June 17	Aug. 14
FLORIDA.				
Gainesville	University of Florida	A. A. Murphree	June 17	Aug. 9
Madison	Florida Normal Institute	W. B. Cate	June 11	Aug. 24
Tallahassee	Florida State College for Women	N. M. Salley	June 17	Aug. 9
GEORGIA.				
Athens	University of Georgia	Howard W. Odum	July 1	Aug. 3
Atlanta	Georgia School of Technology	A. B. Morton	July 22	Sept. 14
Macon	Mercer University	R. L. Pulliam	June 15	Aug. 24
Milledgeville	Georgia Normal and Industrial College.	M. M. Parks	June 1	June 29
Oxford	Emory College	Nolan A. Goodyear	June 18	Aug. 14
Valdosta	South Georgia State Normal College	R. H. Powell	June 6	June 30
IDAHO.				
Albion	State Normal School	G. A. Axline	June 4	Aug. 2
Lewiston	do	Oliver M. Elliott	do	Do.
ILLINOIS.				
Carbondale	Southern Illinois State Normal University.	H. W. Shryock	June 24	Aug. 1
Charleston	Eastern Illinois State Normal School	L. C. Lord	June 10	July 19
Chicago	American College of Physical Education.	Clarence Rainwater	July 1	Aug. 10
Do	Armour Institute of Technology	H. M. Raymond	June 3	July 12
Do	Chicago Normal School	William B. Owen	July 1	Aug. 2
Do	Chicago Normal School of Physical Education.	Wilhelmina C. McEachern.	do	Aug. 10
Do	De Paul University	Martin V. Moore	June 26	Aug. 2
Do	Lewis Institute	George N. Carman	July 1	Aug. 23
Do	Loyola University	Edward Morgan	June 18	Oct. 1
Do	University of Chicago	Harry Pratt Judson	June 17	Aug. 30

XXVIII.—SUMMER SCHOOL DIRECTORS—Continued.

PART 1.—UNIVERSITIES, COLLEGES, AND NORMAL SCHOOLS—Continued.

Location.	Summer school.	Director in 1918.	Session of 1918.	
			Opening.	Close.
ILLINOIS—contd.				
De Kalb	Northern Illinois State Normal School.	John W. Cook	June 24	Aug. 2
Evanston	Garrett Biblical Institute	Charles M. Stuart	June 17	Aug. 30
Do	Northwestern University	Clarence S. Marsh	July 1	Aug. 10
Macomb	Western Illinois State Normal School.	W. P. Morgan	June 10	July 19
Normal	Illinois State Normal University	David Felmley	...do....	Aug. 28
Peoria	Bradley Polytechnic Institute	Albert F. Siepert	June 19	July 26
Urbana	University of Illinois	K. C. Babcock	June 17	Aug. 9
Wheaton	Wheaton College	W. F. Rice	...do....	July 26
INDIANA.				
Bloomington	Indiana University	Will D. Howe	June 13	Aug. 9
Danville	Central Normal College	Jonathan Rigdon	May 21	Aug. 8
Goshen	Goshen College	Daniel S. Gerig	June 10	Aug. 23
Greencastle	De Pauw University	Harry B. Gough	June 5	Aug. 21
Hanover	Hanover College	W. A. Millis	June 10	Aug. 29
Indianapolis	Butler College	Thomas C. Howe	June 17	July 27
Do	Indiana Central University	I. J. Good	May 27	Aug 17
Do	Normal College of the North American Gymnastic Union.	Emil Rath	July 1	July 2
Do	Teachers College of Indianapolis	Eliza A. Blaker	May 21	Sept. —
Do	Vocational education courses (Indiana University).	E. A. Lee	June 17	July 12
Marion	Marion Normal Institute	Stewart P. Hatton	June 3	Aug. 23
Muncie	Indiana State Normal School	B. F. Moore	June 17	Aug. 30
Notre Dame	St. Mary's College	Mother M. Pauline	July 1	Aug. 7
Oakland City	Oakland City College	W. P. Dearing	June 10	Aug. 30
Terre Haute	Indiana State Normal School	Wm. W. Parsons	June 17	Do.
Valparaiso	Valparaiso University	Henry B. Brown	May 28	Aug. 15
Winona Lake	Indiana University Biological Station.	Carl H. Eigenmann	June 15	Aug. 16
Do	Winona College	Charles Manchester	July 8	Aug. 15
IOWA.				
Ames	Iowa State College of Agriculture and Mechanic Arts.	G. M. Wilson	June 3	Aug. 22
Cedar Falls	Iowa State Teachers College	Homer H. Seerley	June 7	Aug. 23
Cedar Rapids	Coe College	W. S. Newell	June 10	Aug. 17
Denison	Iowa State Teachers College Extension	A. C. Fuller, jr	June 7	Aug. 23
Des Moines	Des Moines-Highland Park College	Arthur E. Bennett	May 21	Aug. 10
Do	Drake University	W. F. Barr	June 10	Aug. 17
Dubuque	Dubuque College	George W. Heitkamp	June 24	Aug. 31
Fayette	Upper Iowa University	Chauncey P. Colegrove	June 10	Aug. 17
Indianola	Simpson College	James W. Campbell	...do....	Do.
Iowa City	State University of Iowa	Charles H. Weller	June 17	Aug. 24
Iowa Falls	Ellsworth College	Ido Franklin Meyer	June 10	Aug. 17
Milford	Macbride Lakeside Laboratory (State University of Iowa).	B. Shimek	June 17	July 27
Mount Pleasant	Iowa Wesleyan College	H. E. Jacques	May 13	July 15
Mount Vernon	Cornell College	George H. Betts	June 10	Aug. 17
Oskaloosa	Penn College	S. M. Hadley	June 3	Aug. 10
Red Oak	Iowa State Teachers College Extension	Leslie I. Reed	June 7	Aug. 23
Sioux City	Morningside College	E. A. Brown	June 10	Aug. 30
Spencer	Iowa State Teachers College Extension	Hugh S. Buffum	June 7	Aug. 23
KANSAS.				
Baldwin City	Baker University	Lilian Scott	May 16	June 27
Emporia	Kansas State Normal School	Norman Triplett	May 29	July 26
Hays	Fort Hays Kansas Normal School	W. A. Lewis	May 28	Do.
Lawrence	University of Kansas	Frederick J. Kelly	June 4	Aug. 9
Manhattan	Kansas State Agricultural College	Edwin L. Holton	May 31	Aug. 2
Pittsburg	State Manual Training Normal School.	W. A. Brandenburg	May 27	July 17
Topeka	Washburn College	Parley P. Womer	May 24	July 3
Wichita	Fairmount College	Arthur J. Hoare	June 10	July 19
Do	Friends University	Grace E. Maclean	June 4	July 12
KENTUCKY.				
Bowling Green	Western Kentucky State Normal School.	H. H. Cherry	June 17	July 26
Lexington	University of Kentucky	James T. C. Noe	...do....	July 28
Richmond	Eastern Kentucky State Normal School.	Thomas J. Coates	...do....	July 26

XXVIII.—SUMMER SCHOOL DIRECTORS—Continued.

PART 1.—UNIVERSITIES, COLLEGES, AND NORMAL SCHOOLS—Continued.

Location.	Summer school.	Director in 1918.	Session of 1918.	
			Opening.	Close.
LOUISIANA.				
Baton Rouge	Louisiana State University	Delmar T. Powers	June 6	Aug. 7
Natchitoches	Louisiana State Normal School	V. L. Roy	May 29	July 3
New Orleans	Tulane University of Louisiana	A. B. Dinwiddie	June 10	July 20
Do	College of Medicine	Isadore Dyer	...do	Do.
MAINE.				
Castine	Eastern State Normal School	Albert F. Richardson	July 15	Aug. 2
Farmington	State Normal School	W. G. Mallett	June 24	July 12
Fort Kent	...do	Mary P. Nowland	...do	Do.
Gorham	...do	W. E. Russell	...do	Do.
Machias	...do	Wm. L. Powers	...do	Do.
Presque Isle	...do	San Lorenzo Merriman	July 15	Aug. 23
Technology	Surveying camp of Massachusetts Institute of Technology.	Charles M. Spofford	July 30	Sept. 15
MARYLAND.				
Baltimore	Johns Hopkins University	Edward F. Buchner	July 9	Aug. 16
MASSACHUSETTS.				
Amherst	Massachusetts Agricultural College	Andrew S. Thomson	July 1	July 30
Boston	Boston University	Alexander H. Rice	July 8	Aug. 17
Do	Harvard Graduate School of Medicine	Horace D. Arnold	June 1	Sept. 30
Do	Posse Normal School of Gymnastics	Hartvig Nissen	June 26	Aug. 3
Do	Simmons College	Henry Lefavour	July 8	Aug. 16
Cambridge	Harvard University	K. G. T. Webster	July 1	Aug. 10
Do	Massachusetts Institute of Technology	Richard C. Maclaurin	June 10	Sept. 20
Fitchburg	State Normal School	John G. Thompson	July 8	Aug. 24
Hyannis	...do	W. A. Baldwin	July 9	Aug. 9
Newton Center	Newton Theological Institution	W. N. Donovan	June 11	June 21
Woods Hole	Marine Biological Laboratory	Frank R. Lillie	July 3	Aug. 13
MICHIGAN.				
Ann Arbor	University of Michigan	Edward H. Kraus	July 1	Aug. 23
	Law School	...do	June 24	Aug. 31
	Medical school	...do	July 1	Aug. 9
Battle Creek	Normal School of Physical Education	Frank J. Born	July 8	Aug. 16
East Lansing	Michigan Agricultural College	Edward H. Ryder	June 24	Aug. 2
Kalamazoo	Western State Normal School	Dwight B. Waldo	...do	Do.
Marquette	Northern State Normal School	James H. B. Kaye	...do	Do.
Mount Pleasant	Central State Normal School	E. C. Warriner	...do	Do.
Topinabee	University of Michigan Biological Station.	George R. La Rue	July 1	Aug. 23
Ypsilanti	Michigan State Normal College	Charles McKenny	June 24	Aug. 2
MINNESOTA.				
Duluth	State Normal School	E. W. Bohannon	June 17	July 26
Mankato	...do	Charles H. Cooper	...do	Do.
Minneapolis	University of Minnesota	Lotus D. Coffman	June 24	Aug. 2
Moorhead	State Normal School	Frank A. Weld	June 17	July 26
St. Cloud	...do	J. C. Brown	...do	Do.
St. Paul	State Teachers' Training School	A. V. Storm	...do	Do.
Do	University of Minnesota College of Agriculture.	Roscoe W. Thatcher	...do	Do.
Winona	College of St. Teresa	Mary A. Molloy	June 28	Aug. 8
Do	State Normal School	G. E. Maxwell	June 17	July 26
MISSISSIPPI.				
Agricultural College.	Mississippi A. and M. College	Joseph C. Robert	June 11	July 20
Hattiesburg	Mississippi Normal College	Joe Cook	May 20	June 21
Meridian	Meridian College	A. S. McClendon	June 10	July 13
MISSOURI.				
Cameron	Missouri Wesleyan College	Emily S. Dexter	June 3	July 26
Cape Girardeau	State Normal School	W. S. Dearmont	...do	Aug. 9
Columbia	University of Missouri	Charles H. Williams	June 6	Aug. 1
Kirksville	State Normal School	John R. Kirk	May 29	Aug. 7
Marshall	Missouri Valley College	Albert McGinnis	June 3	Aug. 10
Maryville	State Normal School	Ira Richardson	May 27	Aug. 2
Rolla	State School of Mines	A. L. McRae	...do	July 6

XXVIII.—SUMMER SCHOOL DIRECTORS—Continued.

PART 1.—UNIVERSITIES, COLLEGES, AND NORMAL SCHOOLS—Continued.

Location.	Summer school.	Director in 1918.	Session of 1918.	
			Opening.	Close.
MISSOURI—contd.				
St. Louis	Forest Park College; School of Music	Anna S. Cairns	June 1	Sept. 1
Do	Harris Teachers College	E. George Payne	June 17	July 20
Do	St. Louis University Medical School	D. M. Schoemaker	May 27	July 6
Springfield	State Normal School	W. T. Carrington	do	Aug. 3
Warrensburg	do	E. L. Hendricks	do	Do.
Warrenton	Central Wesleyan College	H. Vosholl	do	Do.
MONTANA.				
Bozeman	Montana State College of Agriculture and Mechanic Arts.	John H. Holst	June 17	July 27
Dillon	State Normal College	Joseph E. Monroe	June 4	Aug. 23
Missoula	University of Montana	Jesse P. Rowe	June 17	Aug. 30
Polson	University of Montana, Biological Station.	M. J. Elrod	June 18	July 31
NEBRASKA.				
Chadron	State Normal School	Robert I. Elliott	June 3	July 26
Collegeview	Union College	Harvey A. Morrison	June 11	Aug. 5
Fremont	Fremont College	W. H. Clemmons	do	Aug. 16
Hastings	Hastings College	R. B. Crone	do	Aug. 2
Kearney	State Normal School	George S. Dick	June 3	July 26
Lincoln	University of Nebraska	W. G. Hastings	May 27	Aug. 16
Omaha	Creighton University	William P. Whelan	June 19	Aug. 2
Do	University of Omaha	Paul R. Stevenson	June 17	Aug. 9
Peru	State Normal School	D. W. Hayes	June 3	July 26
University Place	Nebraska Wesleyan University	Bertram E. McProud	May 28	July 19
Wayne	State Normal School	U. S. Conn	June 3	July 26
York	York College	C. E. Ashcraft	do	Do.
NEVADA.				
Reno	University of Nevada	George F. James	June 17	July 26
NEW HAMPSHIRE.				
Hanover	Dartmouth College	James L. McConaughy	July 9	Aug. 16
Keene	Joint session, State Normal Schools of Plymouth and Keene.	Wallace E. Mason	do	Do.
NEW JERSEY.				
Hoboken	Stevens Institute of Technology	Alex. C. Humphreys	Aug. 12	Sept. 7
Newark	Newark Normal School for Physical Education and Hygiene.	Randall D. Warden	July 8	Aug. 16
New Brunswick	Rutgers College	Charles H. Elliott	July 1	Aug. 9
NEW MEXICO.				
East Las Vegas	New Mexico Normal University	F. H. H. Roberts	June 4	July 25
Silver City	New Mexico State Normal School	E. L. Enloe	June 3	July 26
NEW YORK.				
Alfred	Alfred University	Paul E. Titsworth	July 9	Aug. 21
Auburn	Auburn Theological Seminary	George B. Stewart	July 8	July 27
	Summer School for Christian Workers.	do	July 29	Aug. 10
Brooklyn	Adelphi College	A. G. Fradenburgh	July 8	Aug 16
Geneseo	State Normal School	James V. Sturges	do	Aug. 17
Ithaca	Cornell University	George P. Bristol	do	Aug. 16
New Rochelle	College of New Rochelle	M. M. Xavier	July 5	Aug. 9
New York	College of the City of New York	Paul Klapper	July 1	Aug. 23
Do	Columbia University	James C. Egbert	July 8	Aug. 16
Do	Hunter College	Raymond B. Earle	July 1	Aug. 10
Do	New York University	James E. Lough	do	Aug. 9
Oneonta	State Normal School	Percy I. Bugbee	July 8	Aug. 16
Syracuse	Syracuse University	E. Ellwood Smith	do	Do.
Troy	Rensselaer Polytechnic Institute	Palmer C. Ricketts	June 14	Aug. 14
NORTH CAROLINA.				
Chapel Hill	University of North Carolina	N. W. Walker	June 11	July 25
Cullowhee	Cullowhee Normal and Industrial School.	A. C. Reynolds	June 12	Do.
Elizabeth City	State Colored Normal and Industrial School.	P. W. Moore	July 1	Do.

XXVIII.—Summer School Directors—Continued.

PART 1.—UNIVERSITIES, COLLEGES, AND NORMAL SCHOOLS—Continued.

Location.	Summer school.	Director in 1918.	Session of 1918.	
			Opening.	Close.
NORTH CAROLINA—continued.				
Greensboro	State Normal and Industrial College	Walter C. Jackson	May 31	July 26
Greenville	East Carolina Teachers Training School.	C. W. Wilson	June 11	Aug. 3
Wake Forest	Wake Forest College	Wm. L. Poteat	June 4	Aug. 23
West Raleigh	North Carolina State College of Agriculture and Engineering.	W. A. Withers	June 11	July 25
NORTH DAKOTA.				
Ellendale	State Normal and Industrial School	R. M. Black	June 23	Aug. 1
Jamestown	Jamestown College	Wm. B. Thomas	June 25	Aug. 7
Mayville	State Normal School	Thos. A. Hillyer	July 1	Do
Minot	do	William F. Clarke	June 26	Aug. 6
University	University of North Dakota	A. J. Ladd	June 24	Aug. 2
Valley City	State Normal School	George A. McFarland	June 26	Aug. 6
OHIO.				
Ada	Ohio Northern University	John Davison	May 28	Aug. 16
Akron	Municipal University of Akron, College of Engineering.	Fred E. Ayer	June 3	Aug. 17
Alliance	Mount Union College	J. B. Bowman	June 24	Aug. 2
Ashland	Ashland College	Wm. D. Furry	May 6	July 26
Athens	Ohio University	Alston Ellis	June 22	Aug. 2
	Continuation summer school	John J. Richeson	Aug. 5	Sept. 7
Berea	Baldwin-Wallace College	F. D. Ward	June 17	July 27
Bluffton	Bluffton College	N. E. Byers	June 3	Aug. 23
Bowling Green	State Normal College [1]	H. B. Williams	Apr. 29	Aug. 24
Cleveland	Case School of Applied Science	C. S. Howe	June 24	Aug. 2
Columbus	Ohio State University	M. Blakemore Evans	do	Aug. 16
Defiance	Defiance College [2]	Albert G. Caris	May 6	Sept. 6
Kent	State Normal College [2]	J. E. McGilvrey	Apr. 29	Aug. 30
New Concord	Muskingum College [2]	Howard McDonald	do	Do.
Oberlin	Oberlin College	Edward A. Miller	June 21	Aug. 8
Oxford	Miami University [2]	H. C. Minnich	Apr. 29	Aug. 30
Put in Bay	Lake Laboratory (Ohio State University).	Herbert Osborn	June 24	Aug. 3
Rio Grande	Rio Grande College	W. G. Scarberry	do	Aug. 2
Springfield	Wittenberg College	T. Bruce Birch	do	Do.
Toledo	Toledo University	Frank V. Quillin	July 1	Aug. 12
Westerville	Otterbein University	W. G. Clippinger	June 17	July 26
Wilberforce	Wilberforce University (colored)	Gilbert H. Jones	June 24	Aug. 3
Wilmington	Wilmington College	J. Edwin Jay	June 18	Aug. 9
OKLAHOMA.				
Ada	East Central State Normal School	J. M. Gordon	May 24	July 20
Alva	Northwestern State Normal School	A. S. Faulkner	do	Do.
Durant	Southeastern State Normal School	T. D. Brooks	do	Do.
Edmond	Central State Normal School	J. W. Graves	May 23	July 19
Norman	University of Oklahoma	W. W. Phelan	June 1	July 31
Stillwater	Oklahoma Agricultural and Mechanical College.	J. H. Bowers	June 3	Aug. 2
Tahlequah	Northeastern State Normal School	G. W. Gable	May 27	July 19
Weatherford	Southwestern State Normal School	J. B. Eskridge	May 24	July 20
OREGON.				
Corvallis	Oregon Agricultural College	E. D. Ressler	June 10	July 20
Eugene	University of Oregon	Joseph Schafer	June 24	Aug. 2
Monmouth	Oregon Normal School	J. H. Ackerman	do	July 2
Portland	Reed College	Everett C. Beach	do	Sept. 5
Do	University of Oregon Extension	George Rebec	do	Aug. 2
PENNSYLVANIA.				
Allentown	Muhlenberg College	Isaac M. Wright	June 29	Aug. 9
Beaver Falls	Geneva College	R. H. Martin	June 10	Aug. 3
Collegeville	Ursinus College	W. A. Kline	June 24	Aug. 2
Grove City	Grove City College	Weir C. Kettler	June 21	Do.
Millersville	State Normal School	P. M. Harbold	June 24	Do.
Philadelphia	Dropsie College	Cyrus Adler	July 9	Aug. 23
Do	Temple University	James H. Dunham	July 8	Aug. 17
Pittsburgh	University of Pittsburgh	J. C. Fettermann	July 1	Aug. 24

[1] Summer term includes 3 sessions.

[2] Summer school includes 3 terms of 6 weeks each.

XXVIII.—SUMMER SCHOOL DIRECTORS—Continued.

PART 1.—UNIVERSITIES, COLLEGES, AND NORMAL SCHOOLS—Continued.

Location.	Summer school.	Director in 1918.	Session of 1918.	
			Opening.	Close.
PENNSYLVANIA—continued.				
Selinsgrove	Susquehanna University	Herbert A. Allison	June 24	Aug. 2
South Bethlehem	Lehigh University	Percy Hughes	July 1	Aug. 24
Shippensburg	Cumberland Valley State Normal School.	J. S. Heiges	...do...	Aug. 9
State College	Pennsylvania State College	Edwin R. Smith	...do...	Do.
West Chester	State Normal School	Addison L. Jones	June 24	Aug. 2
SOUTH CAROLINA.				
Orangeburg	Colored Normal, Industrial, Agricultural, and Mechanical College of South Carolina.	B. F. Cox	June 24	July 19
Rock Hill	Winthrop Normal and Industrial College.	David B. Johnson	June 18	July 26
SOUTH DAKOTA.				
Aberdeen	Northern Normal and Industrial School.	Willis E. Johnson	June 3	Aug. 23
Brookings	South Dakota State College of Agriculture and Mechanic Arts.	E. D. Stivers	June 10	July 13
Huron	Huron College	C. W. Hochstetler	May 20	June 21
Madison	State Normal School	F. A. Buechel	June 3	Aug. 23
Mitchell	Dakota Wesleyan University	Herbert Patterson	June 10	July 19
Spearfish	State Normal School	F. L. Cook	June 11	Do.
Springfield	....do	G. G. Wenzlaff	May 27	Aug. 3
Vermilion	University of South Dakota	W. Franklin Jones	June 10	July 19
Yankton	Yankton College	M. A. Stewart	June 3	July 12
TENNESSEE.				
Harrogate	Lincoln Memorial University	B. A. Wise	May 13	Aug. 2
Johnson City	East Tennessee State Normal School	Sidney G. Gilbreath	June 11	July 20
Knoxville	Knoxville College (colored)	R. W. McGranahan	...do...	July 22
Do	University of Tennessee	Brown Ayres	June 18	July 26
Memphis	West Tennessee State Normal School	J. W. Brister	June 10	July 19
Murfreesboro	Middle Tennessee State Normal School.	R. L. Jones	...do...	Do.
Nashville	George Peabody College for Teachers	Bruce R. Payne	June 13	Aug. 23
Do	Tennessee Agricultural and Industrial State Normal School (colored).	W. J. Hale	...do...	July 19
TEXAS.				
Abilene	Simmons College	J. D. Sandefer	June 6	Aug. 22
Austin	University of Texas	W. S. Sutton	June 12	Aug. 31
Belton	Baylor College	W. M. W. Splawn	June 5	Aug. 10
Canyon	West Texas State Normal College	R. B. Cousins	June 10	Aug. 17
College Station	Agricultural and Mechanical College of Texas.	James O. Morgan	June 3	July 27
Commerce	East Texas State Normal College	R. B. Binnion	June 11	Aug. 22
Dallas	Southern Methodist University	John H. Keen	June 12	July 31
Denton	College of Industrial Arts	F. M. Bralley	June 4	Aug. 22
Do	North Texas State Normal College	W. H. Bruce	...do...	Aug. 10
Fort Worth	Southwestern Baptist Theological Seminary.	Lee R. Scarborough	June 3	July 12
Do	Texas Christian University	E. M. Waits	June 10	July 19
Georgetown	Southwestern University	R. W. Tinsley	June 17	Aug. 31
Huntsville	Sam Houston Normal Institute	H. F. Estill	June 7	Aug. 14
Prairie View	Prairie View State Normal (colored)	I. M. Terrell	June 5	Aug. 10
San Marcos	Southwest Texas State Normal School.	C. E. Evans	June 6	Aug. 13
Waco	Baylor University	S. P. Brooks	June 10	Aug. 23
Waxahachie	Trinity University	W. M. Liggett	...do...	July 20
UTAH.				
Logan	Agricultural College of Utah	J. H. Linford	June 10	Aug. 30
Salt Lake City	University of Utah	Milton Bennion	...do...	Do.
VERMONT.				
Burlington	University of Vermont and State Agricultural College.	J. F. Messenger	July 8	Aug. 16
Castleton	State Normal School	Charles A. Adams	July 1	July 28
Johnson	....do	Bessie B. Goodrich	...do...	Do.
Middlebury	Middlebury College	Raymond McFarland	July 6	Aug. 16

XXVIII.—SUMMER SCHOOL DIRECTORS—Continued.

PART 1.—UNIVERSITIES, COLLEGES, AND NORMAL SCHOOLS—Continued.

Location.	Summer school.	Director in 1918.	Session of 1918.	
			Opening.	Close.
VIRGINIA.				
Charlottesville	University of Virginia	Charles G. Maphis	June 17	July 27
Dublin	College of William and Mary	J. S. Wilson	do.	Aug. 10
East Radford	State Normal School	J. P. McConnell	do.	Aug. 30
Emory	Emory and Henry College	Fred Allison	June 13	July 25
Fredericksburg	State Normal School	E. H. Russell	June 17	July 24
Hampton	Hampton Normal and Agricultural Institute (colored).	George P. Phenix	June 19	July 17
Harrisonburg	State Normal School	William T. Sanger	June 17	Aug. 30
Petersburg	Virginia Normal and Industrial Institute (colored).	J. M. Gandy	do.	July 27
Richmond	Virginia Union University (colored)	George R. Hovey	do.	July 26
WASHINGTON.				
Bellingham	State Normal School	George W. Nash	June 3	Aug. 2
Centralia	Centralia Summer Normal (Ellensburg State Normal School).	Earl S. Wooster	do.	Do.
Cheney	State Normal School	J. E. Buchanan	do.	Do.
Ellensburg	do.	George H. Black	do.	Do.
Friday Harbor	Puget Sound Biological Station (University of Washington).	T. C. Frye	June 24	
Pullman	State College of Washington	A. A. Cleveland	June 3	July 13
Puyallup	Summer School of Agriculture (State College of Washington).	Frank O. Kreager	June 24	Aug. 2
Seattle	University of Washington	Frederick E. Bolton	June 18	Aug. 31
Tacoma	College of Puget Sound	O. Edgar Reynolds	do.	Aug. 17
WEST VIRGINIA.				
Athens	Concord State Normal School	Fred A. Forster	June 11	Aug. 3
Bethany	Bethany College	T. E. Cramblet	June 20	July 31
Buckhannon	West Virginia Wesleyan College	T. W. Haught	June 13	Aug. 8
Fairmont	State Normal School	Joseph Rosier	June 17	July 26
Glenville	do.	E. G. Rohrbaugh	June 6	July 31
Huntington	Marshall College	O. I. Woodley	June 17	July 26
Morgantown	West Virginia University	Waitman Barbe	do.	Aug. 17
Shepherdstown	Shepherd College State Normal School.	A. D. Kenamond	do.	July 26
West Liberty	State Normal School	John C. Shaw	do.	Do.
WISCONSIN.				
Berlin	Green Lake County Training School	C. D. Lamberton	June 17	July 26
Eau Claire	State Normal School	C. J. Brewer	do.	Do.
La Crosse	do.	Fassett A. Cotton	do.	Do.
Madison	University of Wisconsin	S. H. Goodnight	June 24	Aug. 2
Menomonie	Stout Institute	R. H. Rodgers	July 29	Aug. 30
Milwaukee	Marquette University	J. A. Murphy	June 24	Aug. 2
Do	National German-American Teachers' Seminary.	Max Griebsch	July 1	Do.
Do	State Normal School	C. G. Pearse	June 24	July 27
Oshkosh	do.	H. A. Brown	do.	Aug. 2
Platteville	do.	A. M. Royce	June 17	July 26
River Falls	do.	J. H. Ames	June 10	July 19
Stevens Point	do.	J. F. Sims	June 24	Aug. 2
Superior	do.	V. E. McCaskill	June 17	July 26
Whitewater	do.	A. H. Yoder	do.	July 20
WYOMING.				
Laramie	University of Wyoming	J. E. Butterworth	June 17	July 26

PART 2.—SECONDARY SCHOOLS, INCLUDING INSTITUTIONS OF HIGHER RANK NOT APPEARING IN PART 1.

ALABAMA.				
Fairhope	Fairhope Summer School	Marietta L. Johnson	June 3	July 15
Huntsville	Oakwood Manual Training School (colored).	J. I. Beardsley	June 4	July 16
CALIFORNIA.				
Berkeley	California School of Arts and Crafts	F. H. Meyer	June 24	Aug. 3
Los Angeles	Krotona Institute of Theosophy	Frederick F. Strong	July 29	Sept. 1
Do	Los Angeles School of Art and Design	L. E. G. Macleod	June 18	Sept. 14

XXVIII.—Summer School Directors—Continued.

SECONDARY SCHOOLS, INCLUDING INSTITUTIONS OF HIGHER RANK NOT APPEARING IN PART 1—Continued.

	Summer school.	Director in 1918.	Session of 1918.	
			Opening.	Close.
con.				
......	Riverside Library Service School......	Joseph F. Daniels.......	June 24	Aug. 16
.....	California School of Fine Arts.........	Lee F. Randolph........	...do.....	Aug. 3
......	Washburn School.....................	Mary Meyrick...........	July 8	Aug. 16
UT.				
......	Clarence H. White School of Photography.	Clarence H. White......	July 8	Aug. 17
......	University School.....................	George L. Fox...........	July 24	Sept. 20
......	Harström School......................	Carl A. Harström........	Aug. 1	Sept. 16
......	Simsbury Summer Tutoring School...	Walter L. Ferris.........	July 22	Sept. 22
......	Thorpe School........................	....	....	....
E.				
......	State College for Colored Students.....	A. R. Spaid.............	June 10	July 13
OF A.				
......	Emerson Institute.....................	W. H. Randolph....... A. McD. Crawford......	June 17	Sept. 20
......	Florida A. and M. College for Negroes..	Nathan B. Young.......	June 17	Aug. 9
......	Berry School..........................	C. B. Collier.............	May 1	Aug. 27
......	Idaho Technical Institute.............	Miles F. Reed...........	June 3	July 12
......	Ricks Normal College.................	George S. Romney......	June 4	Aug. 30
......	American Conservatory of Music......	J. J. Hattstaedt..........	June 24	July 27
Web-	Applied Arts Summer School.........	Florence H. Fitch.......	July 1	July 20
......	Art Institute of Chicago...............	George W. Eggers.......	June 24	[1] Sept. 13
......	Chicago Academy of Fine Arts........	Carl N. Werntz..........	...do.....	Aug. 31
......	Chicago Kindergarten Institute.......	Mary B. Page............	July 1	July 27
......	Chicago Musical College..............	Felix Borowski..........	June 24	Aug. 3
......	Chicago School of Applied and Normal Art.	Emma M. Church.......	July 29	Aug. 24
......	Chicago School of Civics and Philanthropy.	Graham Taylor.........	June 19	July 26
......	Chicago School of Industrial Art.......	Hugo B. Froehlich......	July 1	Aug. 2
......	Columbia Normal School of Physical Education.	Mary A. Blood...........	...do.....	Aug. 11
......	Columbia School of Music.............	Clare Osborne Reed.....	June 24	July 27
......	Cosmopolitan School of Music and Dramatic Art.	William C. Williams....	...do.....	Do.
......	Gregg Summer Normal................	Henry J. Holm..........	July 1	Aug. 9
......	National Institute of Secretaries.......	Oliver McEwan..........	July 8	Aug. 23
......	National Kindergarten College........	Elizabeth Harrison.....	June 17	Aug. 9
......	Pestalozzi - Froebel Kindergarten Training School.	Bertha H. Hegner.......	July 1	Aug. 6
......	Sherwood Music School...............	Walter Keller...........	July 8	Aug. 19
......	American Institute of Normal Methods	Edward B. Birge........	July 1	July 19
......	National Summer School of Music.....	Ada M. Fleming........	June 29	July 27
......	Culver Military Academy.............	H. G. Glascock..........	July 3	Aug. 28
......	John Herron Art Institute............	Harold H. Brown.......	June 10	Aug. 31
iester.	Manchester College..................	Otho Winger...........	May 27	Aug. 17
-the-	St Mary-of-the-Woods College.........	Sister Basil..............	July 1	Aug. 3

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[1] All normal courses close Aug. 2.

XXVIII.—Summer School Directors—Continued.

PART 2.—SECONDARY SCHOOLS, INCLUDING INSTITUTIONS OF HIGHER RANK NOT APPEARING IN PART 1—Continued.

Location.	Summer school.	Director in 1918.	Session of 1918.	
			Opening.	Close.
IOWA.				
Cedar Rapids	Palmer Method Summer School	W. C. Henning	June 17	July 26
Cherokee	Mount St. Mary Normal Training School.	Mother Gertrude	July 1	Aug. 6
Iowa Falls	Edgewood School of Domestic Arts	Eva Simplot	June 11	July 23
Ottumwa	St. Joseph's Academy	Sister Mary Geraldine	June 10	Aug. 16
LOUISIANA.				
Baton Rouge	Southern University and A. and M. College (colored).	J. S. Clark	June 10	July 20
La Fayette	Southwestern Louisiana Industrial Institute.	E. L. Stephens	June 3	Aug. 3
Ruston	Louisiana Industrial Institute	J. E. Keeny	May 28	July 24
Shreveport	Centenary College	Hugh J. Smith	June 10	Aug. 9
MAINE.				
Boothbay-Harbor	Commonwealth School of Art and Industry.	Asa G. Randall	July 1	Sept. 6
Ogunquit	Summer School of Modeling	V. D. Brenner	July 10	Aug. 20
MARYLAND.				
Baltimore	Peabody Conservatory of Music	Harold Randolph	July 8	Aug. 17
Princess Anne	Princess Anne Academy	T. H. Kiah	June 26	Aug. 1
MASSACHUSETTS.				
Andover	Phillips Academy Military Camp	Alfred E. Stearns	July 3	Aug. 14
Auburndale	American Institute of Normal Methods	Osborne McConathy	July 10	July 31
Boston	Emerson College of Oratory	Walter B. Tripp	July 6	Aug. 2
Boston (30 Huntington Ave.).	Farmer's (Miss) School of Cookery	Alice Bradley	July 1	July 26
Boston (306 Pierce Bldg.).	School of Expression (5 terms)	S. S. Curry	May 13	Aug. 30
Bourne	Old Colony Union Industrial School	M. Maud Myhre	June 27	Oct. 15
Monterey	Berkshire Summer School of Art	Raymond P. Ensign Ernest W. Watson	July 8	Aug. 16
Northampton	Institute of Music Pedagogy	R. L. Baldwin	...do...	July 20
Oak Bluffs	Treat School	Edwin B. Treat	...do...	Oct. 1
Provincetown	Cape Cod School of Art	Charles W. Hawthorne	July 1	Sept. 1
Do	Summer School of Drawing and Painting.	E. Ambrose Webster	June 1	Oct. 1
Woburn	Warren Academy Free Industrial School.	Frank Carter	July 1	Aug. 9
Worcester	Boys' Trade School	Albert J. Jameson	July 8	Aug. 16
Do	Girls' Trade School	Helen R. Hildreth	...do...	Do.
MICHIGAN.				
Berrien Springs	Emmanuel Missionary College	Frederick Griggs	July 1	Aug. 12
Big Rapids	Ferris Institute	W. N. Ferris	May 20	Aug. 9
Detroit	Detroit Conservatory of Music	Frances L. York	June 24	July 27
Do	Detroit Technical Institute	B. D. Edwards	...do...	Aug. 19
Grand Rapids	Grand Rapids Kindergarten Training School.	Clara Wheeler	July 2	Aug. 12
Saugatuck	Summer School of Painting	Frederick F. Fursman	June 28	Aug. 18
MINNESOTA.				
Crookston	North West School of Agriculture	J. H. Hay	June 17	July 26
Minneapolis	Minneapolis School of Art	Mary M. Cheney	...do...	Do.
Do	Minneapolis School of Music, Oratory, and Dramatic Art.	William H. Pontius Charles M. Holt	...do...	Aug. 9
Do	Minnesota College	Frank Nelson	May 27	July 13
Morris	West Central School of Agriculture	C. H. Barnes	June 17	July 26
MISSOURI.				
La Grange	La Grange College	D. J. Scott	June 3	Aug. 10
NEW HAMPSHIRE.				
South Chatham	Hill's (Mrs.) Summer School of Cookery.	Janet M. Hill	July 3	Aug. 1

XXVIII.—Summer School Directors—Continued.

—SECONDARY SCHOOLS, INCLUDING INSTITUTIONS OF HIGHER RANK NOT APPEARING IN PART 1—Continued.

ion.	Summer school.	Director in 1918.	Session of 1918.	
			Opening.	Close.
RSEY.				
....	Princeton Summer School	C. R. Morey	July 22	Sept. 13
....	University Summer School	Garret S. Voorhees	...do....	Sept. 14
ORK.				
....	New York State Library School	James I. Wyer, jr	June 26	July 17
....	Brooklyn Botanic Garden	Ellen Eddy Shaw	July 9	Aug. 13
n.......	Catholic Summer School of America	John J. Donlan	July 1	Sept. 6
ng Har-	Brooklyn Institute of Arts and Sciences, Biological Laboratory.	Charles B. Davenport	July 3	Aug. 13
....	Mackenzie School	J. C. Mackenzie	July 9	Sept. 1
(109 E.).	American Progressive Piano School	Gustav L. Becker	June 10	July 31
(215 W.).	Art Students' League of New York	George B. Bridgman	June 3	Sept. 21
rk (541 on Ave.)	Bible Teachers' Training School	John A. Wood	June 19	July 30
k (7 W. .	Chalif Normal School of Dancing	Louis H. Chalif	June 3	July 26
k (109th Amster- e.).	National Academy of Design	George W. Maynard	June 1	Aug. 31
rk (72 ve.).	New York Preparatory School	E. E. Camerer	June 24	Sept. 6
....	New York School of Fine and Applied Art.	Frank A. Parsons	July 6	Aug. 17
....	New York School of Philanthropy	Porter R. Lee	July 8	Aug. 16
k (30 Ir- .)	Palmer Method Summer School	S. E. Barton	July 1	July 26
....	Rochester Business Institute Summer Normal.	S. C. Williams and J. F. Forbes.	...do....	July 31
phs.....	Saint-Augustine-by-the-Lake Summer School.	Mother Polycarpa	...do....	Aug. 31
Springs..	Skidmore School of Arts	Sarah G. Ross	...do....	Aug. 9
....	"Blue Dome Frat" Summer School of Figure Painting.	Dewing Woodward	June 1	Oct. 1
k.......	Art Students' League of New York	Charles Rosen	June 15	Oct. 15
AROLINA.				
....	Southern Term of the School of Expression of Boston, Mass.	Anna B. Curry	June 29	Aug. 9
....	Appalachian Training School	B. B. Dougherty	June 13	July 26
....	Brevard Institute	L. B. Haynes	June 11	July 21
o.......	Negro Agricultural and Technical College.	F. C. Johnson	June 24	Aug. 3
IO.				
i........	Art Academy of Cincinnati	J. H. Gest	June 17	Aug. 24
....	Ohio Mechanics' Institute	John T. Faig	June 24	Aug. 2
....	Capitol College of Oratory and Music	Frank S. Fox	June 12	Aug. 9
....	State Summer Library School	J. Howard Rice	July 1	Aug. 10
....	Oberlin Business College Normal School.	J. T. Henderson	June 17	Do.
oy.......	Andrews Institute for Girls	S. D. Shankland	...do....	July 21
OMA.				
....	Phillips University	J. W. Tyler	June 3	July 27
ON.				
....	Gregg Summer School (Link's Business College).	A. T. Link	July 1	Aug. 30
LVANIA.				
prings...	Pennsylvania Academy of the Fine Arts.	D. Roy Miller	Mar. 29	Nov. 30
hington.	Darby School of Painting	Hugh H. Breckenridge	June 3	July 20
....	Lycoming County Normal	Sylvester B. Dunlap	June 24	Aug. 23
hia......	Brown Preparatory School	Alonzo Brown	June 20	Aug. 29
....	Neff College	Silas S. Neff	July 1	July 26
....	Pennsylvania Museum School of Industrial Art.	O. F. Ege	July 8	Aug. 2

XXVIII.—Summer School Directors—Continued.

PART 2.—SECONDARY SCHOOLS, INCLUDING INSTITUTIONS OF HIGHER RANK NOT APPEARING IN PART 1—Continued.

Location.	Summer school.	Director in 1918.	Session of 1918.	
			Opening.	Close.
PENNSYLVANIA—continued.				
Pittsburgh (Mount Oliver).	Byron W. King's School of Oratory...	Byron W. King.........	June 9	July 19
Swarthmore.......	Swarthmore Preparatory School.......	Walter C. Crouch.......	June 20	(1)
TENNESSEE.				
Cookeville.........	Tennessee Polytechnic Institute.......	Thomas A. Early.......	June 10	July 20
Quebeck..........	Webb Summer School................	E. T. Price.............	May 31	Aug. 9
TEXAS.				
Clarendon.........	Clarendon College.....................	L. E. Gribble............	May 22	July 3
San Antonio......	Our Lady of the Lake College..........	Mother M. Florence.....	July 1	July 31
Stephenville......	John Tarleton College.................	R. F. Holloway.........	June 7	July 26
UTAH.				
Provo.............	Church Teachers College (Brigham Young University).	G. H. Brimhall..........	June 3	Aug. 23
VIRGINIA.				
Lawrenceville.....	St. Paul Normal and Industrial School (colored).	James S. Russell........	June 26	July 24
WEST VIRGINIA.				
Salem.............	Salem College.........................	C. B. Clark..............	June 3	July 26

PART 3.—SUMMER NORMAL TRAINING SCHOOLS.

Birmingham, Ala.	Birmingham Summer Tarining School.	C. B. Glenn.............	June 3	July 12
Do............	Birmingham Summer Training School (colored).	....	....	....
Mobile, Ala.......	Summer Training School for Teachers.	C. F. Vigor..............	June 3	July 12
Boulder, Colo.....	Colorado Chautauqua Summer Schools	Charles C. Casey........	July 8	Aug. 16
Boise, Idaho......	State Summer School for Teachers.....	C. E. Rose..............	June 17	July 24
Franklinton, La...	Florida Parishes State Normal School.	W. J. Dunn..............	June 10	July 20
Shreveport, La....	Summer School for Teachers (colored).	R. P. Player............	...do.....	Do.
Blue Mountain, Miss.	State Summer Normal................	W. T. Lowrey..........	June 4	July 12
Clinton, Miss.....	Clinton Summer Normal..............	J. W. Provine...........	June 11	July 13
Mound Bayou, Miss.	State Normal for Negroes.............	G. H. Armstrong........	July 22	Aug. 23
Newton, Miss.....	Newton Summer Normal.............	A. S. McClendon........	June 10	July 13
Glendive, Mont...	Summer School for Teachers..........	R. H. Brown............	June 12	July 24
Havre, Mont......	.....do................................	Laura G. Lovett.........	July 22	Aug. 31
Lewistown, Mont.	.....do................................	F. L. Cummings.........	July 15	Aug. 24
Malta, Mont.......	.....do................................	Flora Sims..............	July 22	Aug. 30
Collingswood, N. J	.....do................................	T. D. Sensor............	July 1	Aug. 9
Newton, N. J.....	.....do................................	.....do..................	...do.....	Do.
Ocean City, N. J..	.....do................................	.....do..................	...do.....	Aug. 3
Cortland, N. Y....	Cortland Summer School.............	L. J. McEvoy...........	July 2	Aug. 9
Dickinson, N. Dak.	Summer School for Teachers..........	P. S. Berg..............	June 24	July 27
Oregon City, Oreg.	County Summer School for Teachers..	J. E. Calavan...........	July 29	Aug. 16
Portland, Oreg....	Summer School of Primary Methods..	Ruby S. Brennan.......	June 24	July 5
Brush Valley, Pa.	Mechanicsburg Summer Normal......	R. O. Lytle.............	May 6	June 28
Arlington, Tex....	State Summer Normal................	R. T. Ellis..............	June 10	July 25
Athens, Tex......	.....do................................	C. G. Masterson.........	June 2	Do.
Austin, Tex.......	State Summer Normal (colored).......	B. F. Lee...............	June 10	Do.
Beaumont, Tex...	State Summer Normal................	H. F. Triplett...........	June 17	July 26
Do............	State Summer Normal (colored).......	T. J. Carlton............	June 3	Do.
Belton, Tex.......	State Summer Normal................	Peyton Jacob...........	June 10	July 25
Brenham, Tex....	.....do................................	D. H. Fisher............	June 17	Do.
Brownwood, Tex.	.....do................................	V. L. Griffin............	June 3	July 24
Brownsville, Tex.	.....do................................	W. F. Jourdan..........	June 12	July 26

[1] Sessions of 6, 10, and 14 weeks' duration.

XXVIII.—Summer School Directors—Continued.

PART 3.—SUMMER NORMAL TRAINING SCHOOLS—Continued.

Location.	Summer school.	Director in 1918.	Session of 1918.	
			Opening.	Close.
dwell, Tex.	State Summer Normal (colored)	I. B. Bryant	June 17	July 25
co, Tex.	State Summer Normal	L. H. Denman	June 10	July 20
manche, Tex.	do	J. B. Layne	June 3	July 25
nroe, Tex.	State Summer Normal (colored)	A. M. Story	July 15	Aug. 22
ckett, Tex.	do	A. W. Pryor	June 17	
Paso, Tex.	State Summer Normal	R. R. Jones	June 3	
rt Worth, Tex.	State Summer Normal (colored)	W. O. Bundy	do	July 26
nzales, Tex.	State Summer Normal	J. C. Cochran	do	July 25
eenville, Tex.	do	J. A. Cagle	do	Do.
ndo, Tex.	do	T. L. Williams	do	Do.
uston, Tex.	do	A. F. English	do	Do.
Do	State Summer Normal (colored)	W. L. Johnson	June 4	Aug. 22
ufman, Tex.	do	W. H. Burnett	June 17	
Grange, Tex.	do	G. A. Randolph	June 10	July 25
Kinney, Tex.	State Summer Normal	J. H. Head	do	July 27
Do	State Summer Normal (colored)	T. C. Martin	June 17	July 25
rshall, Tex.	State Summer Normal	G. H. Carpenter	June 3	Do. 24
Do	State Summer Normal (colored)	H. B. Pemberton	June 17	Aug. 1
ridian, Tex.	State Summer Normal	C. C. Comer	June 3	July 25
. Pleasant, Tex.	State Summer Normal (colored)	G. L. Nelson	July 8	Aug. 22
ris, Tex.	State Summer Normal	C. W. Bolin	June 3	July 26
n Antonio, Tex.	do	Charles A. Arnold	June 12	July 25
erman, Tex.	do	J. C. Pyle	June 10	Do.
huacana, Tex.	do	J. J. Bates	June 11	Aug. 22
ler, Tex.	State Summer Normal (colored)	W. H. Seals	June 16	July 25
ctoria, Tex.	do	C. H. McGruder	June 18	
aco, Tex.	do	R. L. Clark	June 17	July 24
selder, Tex.	do	W. M. Lamkin	June 10	July 25
eatherford, Tex.	State Summer Normal	H. F. Grindstaff	June 17	Aug. 22
oodville, Tex.	do	P. I. Hunter	do	July 26
g Stone Gap, Va.	Clinch Valley Summer School	J. A. Livesay	June 26	July 24
ristiansburg, Va.	Christiansburg Summer School (colored).	E. A. Long	do	Do.
rmville, Va.	Farmville Summer School	J. L. Jarman	June 17	Do.
lax, Va.	Galax Summer School	B. M. Cox	June 26	Do.
uisa, Va.	Louisa Summer School (colored)	W. L. Ransome	do	Do.
nassas, Va.	Manassas Summer School (colored)	F. D. Morton	do	Do.
rtinsville, Va.	Martinsville Summer School	T. H. Phelps	do	Do.
rfolk, Va.	Norfolk Summer School	E. S. Brinkley	do	Do.
Do	Norfolk Summer School (colored)	T. C. Erwin	do	Do.
cky Mount, Va.	Rocky Mount Summer School (colored).	W. F. Grasty	do	Do.
uth Boston, Va.	South Boston Summer School (colored)	Frank Trigg	do	Do.
attle, Wash.	Northwest Summer Normal	Charles Fagan	June 17	July 26
okane, Wash.	Summer High and Normal School	Henry M. Hart	June 10	Do.

PART 4.—SUMMER SCHOOLS FOR TEACHERS OF EXCEPTIONAL CLASSES.

ribault, Minn.	Courses in mental deficiency (Minnesota School for Feeble Minded).	Fred Kuhlman	June 24	Aug. 3
Louis, Mo.	Central Institute for the Deaf	Julia M. Connery	June 20	July 20
neland, N. J.	Summer school for teachers of backward and mentally deficient children (The Training School at Vineland).	E. R. Johnstone	July 15	Aug. 24
me, N. Y.	Summer Training School (Rome State Custodial Asylum).	Charles Bernstein	July 1	July 27

XXIX.—DIRECTORS OF MUSEUMS.[1]

Location.	Name of museum or of institution controlling it.	Director.
ALABAMA.		
Auburn	Alabama Polytechnic Institute	Charles C. Thach, president.
Birmingham	Birmingham School Museum	J. H. Phillips, superintendent.
Mobile	Y. M. C. A. Library and Museum	Leila Annspaugh, librarian.
Montgomery	Alabama Department of Archives and History	Thomas M. Owen, director.
Talladega	Talladega College	J. P. Metcalf, president.
University	Alabama Museum of Natural History	Eugene Allen Smith, director
ALASKA.		
Juneau	Alaska Historical Library and Museum	Gov. J. F. A. Strong, official custodian.
Sitka	The Sheldon Jackson Museum	
ARIZONA.		
Tucson	University of Arizona Museum	Byron Cummings, curator.
ARKANSAS.		
Conway	Hendrix College, George H. Burr Museum of Natural History.	M. J. McHenry, director.
Fayetteville	University of Arkansas	A. H. Purdue, State geologist.
CALIFORNIA.		
Avalon, Santa Catalina Island.	Tuna Club	
Berkeley	University of California, Department of Botany	W. A. Setchell, in charge.
Do	University of California, Department of Geology and Mineralogy.	Andrew C. Lawson, in charge.
Do	University of California, Museum of Paleontology.	J. C. Merriam, in charge.
Do	University of California, Museum of Vertebrate Zoology.	Joseph Grinnell, director.
Claremont	Pomona College	W. A. Hilton, in charge.
Los Angeles	Museum of History, Science, and Art	Frank S. Daggett, director.
Do	Chamber of Commerce Exhibit	Frank Wiggins, superintendent.
Do	Southern California Academy of Sciences	Holdridge O. Collins, secretary.
Do	The Southwest Museum	Hector Alliot, curator.
Do	University of Southern California	Albert B. Ulrey, curator.
Oakland	Municipal Art Gallery	Robert B. Harshe, director.
Do	Oakland Public Museum	Robert B. Harshe, curator.
Do	Piedmont Art Gallery	Richard L. Partington, curator.
Do	Sage Library	Anna L. Sawyer, librarian.
Pacific Grove	Pacific Grove Museum Association	
Palo Alto	Leland Stanford Junior Museum	H. C. Peterson, director.
Do	Leland Stanford Junior University	E. C. Starke, curator.
Pasadena	Throop College of Technology	W. H. Clapp, in charge.
Sacramento	Crocker Art Gallery	W. F. Jackson, curator.
Santa Barbara	Museum of Comparative Oology	William Leon Dawson, director.
San Francisco	California Academy of Sciences	Barton W. Evermann, director.
Do	California State Mining Bureau	Fletcher Hamilton, curator.
Do	Memorial Museum (Golden Gate Park)	George Haviland Barron, curator.
Do	San Francisco Institute of Art	Nelson Laurvik, director.
Do	University of California, Anthropological Museum.	A. L. Kroeber, curator.
Santa Clara	Santa Clara University, Museum of Mineralogy and Paleontology.	Anthony Cichi, director.
COLORADO.		
Boulder	University of Colorado Museum	Junius Henderson, curator.
Colorado Springs	Colorado College Museum	Edward R. Warren, director.
Denver	Colorado Mineral Museum (State capitol)	T. R. Henahen, director.
Do	Colorado Museum of Natural History	J. D. Figgins, director.
Do	Colorado Scientific Society (Boston Block)	G. L. Cannon, curator.
Do	East Side High School Museum	Do.
Do	State Board of Horticulture	Mrs. Martha Shute, director.
Do	State Bureau of Mines	
Do	State Historical and Natural History Society	Jerome C. Smiley, curator.
Do	Colorado State Museum	Isaac A. Abbot, custodian.
Fort Collins	State Agriculture College	W. L. Burnet, curator.
Golden	Colorado School of Mines, Mineralogical Museum.	H. B. Patton, director.
Greeley	State Teachers College of Colorado	

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[1] Compiled by Harold L. Madison, secretary American Association of Museums, Park Museum, Providence, R. I.

XXIX.—Directors of Museums—Continued.

Location.	Name of museum or of institution controlling it.	Director.
CONNECTICUT.		
Hartford	Connecticut Historical Society	A. C. Bates, secretary and librarian.
Do	Theological Seminary	Charles S. Thayer, curator.
Do	Trinity College, Boardman Hall of Natural History.	Frederic W. Carpenter, director.
Do	Wadsworth Athenæum and Morgan Memorial	Frank Butler Gay, director.
Litchfield	Litchfield Historicla Society	Mrs. Emily N. Vanderpool, curator.
Meriden	Meriden Scientific Association	David Gibbs, president.
Middletown	Middlesex County Historical Society	A. R. Crittenden, curator.
Do	Wesleyan University	William North Rice, director.
New Britain	New Britain Institute	Anna G. Rockwell, librarian.
New Haven	New Haven Colony Historical Society	Frederick Bostwick, curator.
Do	Yale University, the Eaton Herbarium	Alexander W. Evans, curator.
Do	Yale University, Peabody Museum of Natural History.	Charles Schuchert, curator.
Do	Yale University, School of the Fine Arts	William S. Kendall, director.
Do	Yale University, Steiner Collection	
New London	New London Historical Society	Ernest E. Rogers, president.
Norwich	Norwich Free Academy, Slater Memorial Museum.	Helen Marshall, curator.
Storrs	Connecticut Agricultural College	G. H. Lamson, jr., curator.
Waterbury	Mattatuck Historical Society	Rev. Joseph Anderson, president.
DELAWARE.		
Newark	Delaware College	
Wilmington	Natural History Society of Delaware	Linda Palmer-Jones, secretary.
DISTRICT OF COLUMBIA.		
Washington	Army Medical Museum	Maj. R. W. Shufeldt, curator.
Do	Corcoran Gallery of Art	C. Powell Minnigerode, director.
Do	Georgetown University, the Coleman Museum	Francis A. Tondorf, curator.
Do	George Washington University Medical School	F. F. Russell, director.
Do	Library of Congress, Division of Prints	Richard A. Rice, acting chief.
Do	National Gallery of Art, Smithsonian Institution	William H. Holmes, curator.
Do	United States National Museum	Richard Rathbun, assistant secretary, in charge.
FLORIDA.		
De Land	John B. Stetson University, Monroe Health Museum.	John F. Baerecke, director.
Gainesville	University of Florida, Florida State Museum	T. Van Hyning, director.
St. Augustine	St. Augustine Institute of Science and Historical Society.	Dewitt Nebb, president.
GEORGIA.		
Atlanta	State Museum	S. W. McCallie, curator.
Macon	Mercer University	
Oxford	Emory University	H. H. Stone, curator.
Savannah	Telfair Academy of Arts and Sciences	William Harden, custodian.
HAWAII.		
Honolulu	Bernice Pauahi Bishop Museum	William T. Brigham, director.
ILLINOIS.		
Bloomington	Illinois Wesleyan University, Powell Museum	
Do	McLean County Historical Society	Milo Custer, custodian.
Carlinville	Blackburn College, Taylor Museum	
Chicago	Art Institute of Chicago	George W. Eggers, director.
Do	Chicago Academy of Sciences	Frank M. Woodruff, curator.
Do	Chicago Historical Society	Caroline M. McIlvaine, curator.
Do	Field Museum of Natural History	Frederick J. V. Skiff, director.
Do	University of Chicago, Educational Museum	Elliot R. Downing, director.
Do	University of Chicago, Haskell Oriental Museum	James Henry Breasted, director.
Do	University of Chicago, Walker Museum	T. C. Chamberlain, director.
Decatur	James Milliken University, Biological Museum	
De Kalb	Museum of History, State Normal School	Ed. C. Page, in charge.
Elgin	Elgin Scientific Society	

XXIX.—Directors of Museums—Continued.

Location.	Name of museum or of institution controlling it.	Director.
ILLINOIS—continued.		
Evanston	Evanston Historical Society	J. Seymour Currey, president.
Do	Northwestern University-Garrett Biblical Institute, Bennett Museum of Christian Archæology.	Charles M. Stuart, curator.
Do	Northwestern University College of Liberal Arts.	U. S. Grant, curator.
Do	Swedish Historical Society of America	
Galesburg	Knox College, Hurd Museum	B. H. Grave, curator.
Joliet	Joliet Township High School	Stanley Brown, superintendent.
Lake Forest	Lake Forest College Museum	W. C. Allee, curator.
Naperville	Northwestern College	L. M. Umbach, curator.
Rock Island	Augustana College Museum	Marcus Skarstedt.
Springfield	Illinois State Historical Library and Society	
Do	State Museum of National History	A. R. Crook, chief.
Sterling	Whiteside County Historical Society	W. W. Davis, secretary.
Urbana	University of Illinois, Museum of Natural History.	Frank C. Baker, curator.
Do	University of Illinois, Museum of Classical Archæology.	A. S. Pease, curator.
Do	University of Illinois, Museum of European Culture.	N. C. Brooks, curator.
INDIANA.		
Bloomington	Indiana University Museum of Fine Arts	Alfred M. Brooks, curator.
Centerville	Wayne County Historical Society	Caleb King, curator.
Crawfordsville	Wabash College, Hovey Museum	Mason D. Thomas, curator.
Crown Point	Old Settlers and Historical Association of Lake County.	
Farlham	Farlham College, Joseph Moore Museum	
Franklin	Franklin College	J. W. Adams, director.
Goshen	Elkhart County Historical Society	A. E. Weaver, custodian.
Hanover	Hanover College	
Indianapolis	Art Association of Indianapolis, John Herron Art Institute.	Harold Haven Brown, director.
Do	Indiana State Museum	W. S. Blatchley, curator.
Do	University of Indianapolis-Butler College	H. L. Bruner, director.
Marion	Grant County Historical Society, Octogenarian Museum.	R. L. Whitson, director.
Newcastle	Henry County Historical Society	
Noblesville	Hamilton County Historical Association	H. A. Maker, secretary-treasurer.
Notre Dame	Notre Dame University	
Richmond	Earlham College, The Joseph Moore Museum	Allen David Hole, curator.
South Bend	Northern Indiana Historical Society	George A. Baker, secretary.
Terre Haute	Emeline Fairbanks Memorial Library	Mrs. Sallie C. Hughes, librarian.
Upland	Taylor University, Walker Museum	
IOWA.		
Cedar Falls	Iowa State Teachers' College	Melvin F. Arey, curator.
Cedar Rapids	Coe College Museum	B. H. Bailey, curator.
Do	Iowa Masonic Library and Museum	N. R. Parvin, librarian.
Davenport	Davenport Academy of Sciences	E. K. Putnam, acting director.
Des Moines	Historical Department of Iowa	Edgar R. Harlan, curator.
Dubuque	Carnegie-Stout Free Public Library	Almira R. Wilcox, librarian.
Do	Herrmann Museum of Natural History	Richard Herrmann, director.
Fayette	Upper Iowa University	Guy West Wilson, curator.
Grinnell	Parker Museum of Natural History	H. W. Norris, curator.
Independence	Free Public Library	S. W. Geiser, director.
Iowa City	Museum of Art and Archæology	C. H. Weller, director.
Do	Ranney Library and Museum	Jane E. Roberts.
Do	State University of Iowa, Zoological Museum	C. C. Nutting, curator.
Madrid	Madrid Historical Society	
Waverly	Wartburg Teachers Seminary	
KANSAS.		
Atchison	Midland College	D. W. Crouse, director.
Baldwin	Baker University	C. S. Parmenter, chief curator.
Emporia	College of Emporia	D. C. Schaffner, director.
Do	Kansas State Normal School	W. H. Keller, curator.
Lawrence	University of Kansas	Frank Strong, director.
Lindsborg	Bethany College	E. O. Deere, curator.
Manhattan	Kansas State Agricultural College, Natural History Museum.	Robert K. Nahoms, curator.
Topeka	Kansas State Historical Society	George W. Martin, sectrtary.
Do	Washburn College	Ira D. Cardiff, director.
Salina	Kansas Wesleyan University	A. W. Giles, director.

XXIX.—Directors of Museums—Continued.

Location.	Name of museum or of institution controlling it.	Director.
KENTUCKY.		
ling Green	Ogden College	
nkfort	Kentucky State Historical Society	
ington	Kentucky Geological Survey	J. B. Hoenig, director.
Do	Transylvania College	Alfred Fairhurst, director.
isville	Louisville Free Public Library Museum	George T. Settle, librarian.
LOUISIANA.		
n Rouge	Louisiana State University and Agricultural and Mechanical College.	
Orleans	Isaac Delgado Museum of Art	C. W. Boyle, curator.
Do	Louisiana Historical Association (Memorial Hall)	J. W. Gaines, custodian.
Do	Louisiana State Museum	Robert Glenk, director.
Do	Newcomb Art School	Ellswotrh Woodward, director.
Do	Tulane University of Louisiana	George E. Beyer, curator.
MAINE.		
gusta	Kennebec Historical Society	P. S. Mooney, secretary.
Do	Maine State Museum	Thomas A. James, curator.
nswick	Bowdoin College	Henry Johnson, curator.
ot	William Fogg Library	
ckley	Good Will Home Association	
viston	Art Museum of Bates College	Marianna Woodhull, director.
th Bridgton	Bridgton Academy	
no	University of Maine, Museum of Natural History	Mintin A. Chrysler, curator.
s Island	Orrs Island Library	Ellen M. Mountfort, librarian.
is	Hamlin Memorial Hall	
tland	Maine Historical Society	Evelyn L. Gilmore, curator.
Do	Port and Society of Art, L. D. M. Sweat Memorial Art Museum.	John Calvin Stevens, managing director.
Do	Portland Society of Natural History	Arthur H. Norton, librarian.
o	York Institute	
terville	Colby College	
MARYLAND.		
napolis	Maryland Geological Survey	William Bullock Clark, director.
timore	Baltimore Museum of Art	Henry H. Wiegand, secretary.
Do	Goucher College	
Do	Johns Hopkins University, Museum of Oriental and Classical Archæology.	David M. Robinson, director.
Do	Maryland Academy of Sciences	Percy M. Reese, director.
Do	Maryland Institute for the Promotion of the Mechanic Arts.	C. Y. Turner, director.
Do	Peabody Institute	L. H. Dielman, executive secretary.
Do	Walters Gallery	Henry Walters, owner.
cott City	Rock Hill College	Brother Fabrician, registrar.
MASSACHUSETTS.		
herst	Amherst College Museum	B. K. Emerson, director.
Do	Massachusetts Agricultural College	C. E. Gordon, curator.
dover	Abbot Academy	
Do	John-Esther Art Gallery	Jane B. Carenter, custodian.
Do	Phillips Academy	Charles Peabody, director.
verly	Beverly Historical Society	
ston	Boston Society of Natural History	Edward Wigglesworth, chairman executive committee.
Do	Bostonian Society (Old State House)	Charles F. Reed, treasurer.
Do	Children's Art Center	Mr. Fitzroy Carrington, director.
Do	Children's Museum of Boston	Delia I. Griffin, director.
Do	Harvard Medical School, Warren Anatomical Museum.	William F. Whitney, director.
Do	Massachusetts Historical Society	
Do	Museum of Fine Arts	Arthur Fairbanks, director.
Do	Old South Association (The Old South Meeting House).	Richard W. Hale, treasurer. 16 Central Street.
nbridge	Harvard University, Botanical Museum	George L. Goodale, honorary curator.
Do	Harvard University, Collection of Classical Antiquities.	George Henry Chase, curator.
Do	Harvard University, School of Architecture	H. Langford Warren, director.

XXIX.—Directors of Museums—Continued.

Location.	Name of museum or of institution controlling it.	Director.
MASSACHUSETTS—contd.		
Cambridge	Harvard University, Geological Museum	R. W. Sales, curator.
Do	Harvard University, Germanic Museum	Kuno Francke, curator.
Do	Harvard University, Gray Herbarium	B. L. Robinson, curator.
Do	Harvard University, Semitic Museum	David G. Lyon, curator.
Do	Harvard University, Minearalogical Museum	John E. Wolff, curator.
Do	Harvard University, Museum of Comparative Zoology.	Samuel Henshaw, director.
Do	Harvard University, Peabody Museum of Archæology and Ethnology.	C. C. Willoughby, director.
Do	Harvard University, Social Museum	James Ford, director.
Do	Harvard University, Fogg Art Museum	E. W. Forbes, director.
Charlestown	United States Navy Yard	Arthur W. Stone, curator.
Clinton	Clinton Historical Society	E. W. Parkhurst, secretary.
Danvers	Danvers Historical Society	Henry N. Comey, curator.
Deerfield	Pocumtuck Valley Memorial Association	George Sheldon, curator.
Fitchburg	Fitchburg Historical Society	Theresa N. Garfield, librarian.
Do	Wallace Library and Art Gallery	George E. Nutting, librarian.
Gloucester	Cape Ann Scientific and Literary Association	
Greenfield	Historical Society of Greenfield	Mrs. Ida Hall, curator.
Haverhill	Haverhill Historical Society	Leonard W. Smith, curator.
Ipswich	Ipswich Historical Society	
Lancaster	Thayer Museum	John E. Thayer, director.
Leominster	Leominster Public Library	Florence E. Wheeler, curator.
Lexington	Lexington Historical Society	Mrs. Ellen B. Lane, custodian.
Lynn	Lynn Historical Society	C. H. Woodbury, president.
Marblehead	Marblehead Historical Society	Hannah Tutt, curator.
Marlborough	Marlborough Society of Natural History	Joel W. Giles, curator.
Medford	Medford Historical Society	Agnes W. Lincoln, curator.
Nantucket	Nantucket Historical Association	Susan E. Brock, curator.
New Bedford	Old Dartmouth Historical Society	Frank Wood, curator.
Newburyport	Historical Society of Old Newbury	
Northampton	Forbes Library	Lalia May Damon, acting librarian.
Do	Hillyer Art Gallery, Smith College	Alfred V. Churchill, director.
Do	Smith College	
Peabody	Peabody Historical Society	
Pittsfield	Berkshire Athenaeum and Museum	Harlan H. Ballard, curator.
Plymouth	Pilgrim Society	H. N. P. Hubbard, curator.
Rehoboth	Rehoboth Antiquarian Society	
Salem	Essex Institute	Henry K. Belknap, curator.
Do	Peabody Academy of Science, Peabody Museum.	Edward S. Morse, director.
Sharon	Sharon Historical Society	George Kempton, custodian.
Somerville	Somerville Historical Society	
South Natick	Historical, Natural History, and Library Society.	Ida H. Morse, curator.
Springfield	Springfield Art Museum	George Walter Vincent Smith, curator.
Do	Springfield Museum of Natural History	Mrs. Grace P. Johnson, curator.
Do	Connecticut Valley Historical Society	William C. Stone, curator.
Taunton	Bristol County Academy of Sciences	Frederic H. Carpenter, curator.
Topsfield	Topsfield Historical Society	George Francis Dow, curator.
Tufts College	Tufts College, Barnum Museum	H. V. Neal, curator.
Wellesley	Wellesley College, Farnsworth Museum of Art.	Alice Van Vechten Brown, director.
Do	Wellesley College	Albert P. Morse, curator.
Westborough	Westborough Historical Society	Amelia Harrington, curator.
West Newbury	West Newbury Natural History Club	Helen S. Merrill, curator.
Williamstown	Williams College Geological Museum	H. F. Cleland.
Woburn	Woburn Public Library	George Hill Evans, librarian.
Woods Hole	U. S. Bureau of Fisheries	J. E. B. Pope, director.
Worcester	Clark University Educational Museum	W. H. Burnham.
Do	Worcester Art Museum	Raymond Wyer, director.
Do	Worcester Natural History Museum	Mrs. Ella L. Horr, custodian.
Do	Worcester Society of Antiquity	Ellery Bicknell Crane, librarian.
MICHIGAN.		
Alma	Alma College, Francis A. Hood Museum	H. M. MacCurdy, director.
Ann Arbor	University of Michigan	Alexander G. Ruthven, director.
Battle Creek	Public School Museum	
Detroit	Detroit Museum of Art	Clyde H. Burroughs, director.
East Lansing	Michigan Agricultural College	Walter B. Barrows, director.
Grand Rapids	Kent Scientific Museum	Herbert E. Sargent, director.
Houghton	Michigan College of Mines, Mineralogical Museum	A. E. Seaman, director.
Lansing	Michigan Historical Commission	George Newman Fuller, custodian.
Muskegon	Hackley Art Gallery	Miss Lulu F. Miller, director.
Three Oaks	Chamberlain Memorial Museum	

XXIX.—Directors of Museums—Continued.

Location.	Name of museum or of institution controlling it.	Director.
MINNESOTA.		
Collegeville	St. John's University	Severin Gertken, curator.
Minneapolis	Minnesota Academy of Sciences	William H. Dunwoody, president.
Do	Minneapolis Society of Fine Arts	John R. Van Derlip, director.
Do	Walker Private Gallery (807 Hennepin Ave.)	T. B. Walker, director.
Do	University of Minnesota	Christopher W. Hall, curator.
Northfield	Carleton College	
St. Paul	Hamline University	Henry L. Osborn, director.
Do	Minnesota Historical Society	Solon J. Buck, superintendent.
Do	St. Paul Institute Museum and Art Gallery	Arthur Sweeney, director.
St. Peter	Gustavus Adolphus College	J. A. Edquist, curator.
Winona	State Normal School	John M. Holzinger, curator.
MISSISSIPPI.		
Agricultural College	Mississippi Agricultural and Mechanical College.	William N. Logan, director.
Jackson	Millsaps College	J. M. Sullivan, director.
Do	State Department of Archives and History	Dunbar Rowland, director.
MISSOURI.		
Columbia	State Historical Society of Missouri	Floyd C. Shoemaker, secretary.
Do	University of Missouri, Museum of Art and Archeology.	John Pickard, curator.
Doe Run	Graves Private Museum	F. P. Gaves, director.
Glasgow	Pritchett College	
Kansas City	Daniel B. Dyer Museum (Public Library Building).	
Do	Nelson Gallery of Art (Public Library Building).	Mrs. Helen R. Parsons, curator.
Rolla	Bureau of Geology and Mines	H. A. Buehler, director.
Do	Missouri School of Mines, Geological Museum	G. H. Cox, director.
Springfield	Drury College, Edward M. Shepard Museum	Charles H. Spurgeon, curator.
St. Louis	City Art Museum	R. A. Holland, director.
Do	Educational Museum of the St. Louis Public Schools.	C. G. Rathmann, director.
Do	Missouri Historical Society Museum	H. M. Whelpley, director.
Do	Washington University	
MONTANA.		
Helena	Montana State Library	W. Y. Pemberton, librarian.
NEBRASKA.		
Crete	Doane College Museum	Carl O. Carlson, curator.
Hastings	Hasting's College Museum	W. J. Kent.
Lincoln	Nebraska State Historical Society	E. E. Black, curator.
Do	Nebraska State Museum	Erwin H. Barbour, curator.
Omaha	Creighton University	William F. Rigge, director.
Do	Omaha Public Library and Museum	Edith Tobitt.
NEW HAMPSHIRE.		
Concord	New Hampshire Historical Society	Otis G. Hammond, superintendent.
Hanover	Dartmouth College, Butterfield Museum	C. H. Hitchcock, director.
Hopkinton	New Hampshire Antiquarian Society	Sarah U. Kimball, curator.
Keene	Keene High School	James F. Smith.
Manchester	Currier Gallery of Art	Arthur M. Heard.
Do	Manchester Historic Association	Fred. W. Lamb, curator.
NEW JERSEY.		
Flemington	Hunterdon County Historical Society	
Hackensack	Bergen County Historical Society (Johnson Public Library).	Frances A. Westervelt, chairman.
New Brunswick	Rutgers College, Geological Museum	J. A. Volney Lewis, curator.
Newark	New Jersey Historical Society (16 W. Park St.)	A. Van Doren Honeyman.
Do	The Newark Museum Association, The Newark Museum.	John Cotton Dana, director.
Princeton	Princeton University, Museum of Geology and Archeology.	William Libbey, director.
Do	Princeton University, Museum of Historic Art.	Allan Marquand, director.
Salem	Salem County Historical Society	O. W. Acton, curator.
Trenton	New Jersey State Museum	Miss Helen C. Perry, curator.
Vineland	Vineland Historical and Antiquarian Society	Frank D. Andrews, secretary.
Woodbury	Historical Society of Gloucester County	

XXIX.—DIRECTORS OF MUSEUMS—Continued.

Location.	Name of museum or of institution controlling it.	Director.
NEW MEXICO.		
Santa Fe	Historical Society of New Mexico	H. Woodruff, curator.
Do	Museum of New Mexico	Edgar Lee Hewitt, director.
Do	School of American Research, Museum of New Mexico.	
NEW YORK.		
Albany	Albany Institute	I. Townsend Lansing, president.
Do	New York State Museum	John M. Clarke, director.
Alfred	Alfred University, Allen Steinheim and Museum of Natural History.	James D. Bennehoff, curator.
Amsterdam	Montgomery County Historical Society	W. Max Reid, curator.
Binghamton	Broome County Historical Society, Art Gallery and Museum.	William F. Seward, custodian.
Brooklyn	The Brooklyn Museum	William Henry Fox, director.
Do	Polytechnic Institute of Brooklyn	
Do	Pratt Institute, School of Fine and Applied Art	Walter Scott Perry, director.
Buffalo	Buffalo Fine Arts Academy	Mrs. Cornelia B. Sage Quinton, director.
Do	Buffalo Historical Society	Frank H. Severance, secretary.
Do	Buffalo Society of Natural Sciences	Henry R. Howland, treasurer.
Buffalo	Canisius College	Henry Wolff, curator.
Canandaigua	Ontario County Historical Society	Charles F. Milliken, president.
Canton	St. Lawrence University	
Clinton	Hamilton College	Nelson C. Dale, director.
Cortland	F. W. Higgins Museum	F. E. Whitmore, curator.
Elmira	Arnot Art Gallery	Mrs. Jeannette Murdock Diven, director.
Geneseo	Livingston County Historical Society	
Geneva	Hobart College	E. H. Eaton, director.
Glen Iris	Genessee Valley Museum	Caroline Bishop, curator.
Granville	Pember Library and Museum	F. T. Pember, curator.
Hamilton	Colgate University	
Ithaca	Cornell University, College of Civil Engineering.	E. E. Haskell, director.
Do	Cornell University, Geological Museum	Henry S. Williams, director.
Do	Cornell University Museum of Classical Archaeology.	E. P. Andrews, curator.
Do	Cornell University, Museum of Invertebrate Zoology.	John Henry Comstock, director.
Do	Cornell University, Museum of Vertebrate Zoology.	
Do	Cornell University, Veterinary College	Veranus A. Moore, director.
Johnstown	Johnstown Historical Society	Fred. Plamondon, curator.
Lake George	New York State Historical Society	
Staten Island	Staten Island Institute of Arts and Sciences, Public Museum.	Arthur Hollick, director.
Newburgh	State Museum (Washington's Headquarters)	Agnes E. Farrington, curator.
New York City	Academy Mount St. Vincent	
Do	American Museum of Natural History	F. A. Lucas, director.
Do	American Numismatic Society (156th St., west of Broadway).	Bauman L. Belden, director.
Do	Bronx Society of Arts and Sciences, Lorillard Mansion (Bronx Park).	
Brooklyn	Children's Museum (Bedford Park)	Anna B. Galhup, curator.
New York City	Columbia University, Egleston Mineralogical Museum.	Alfred J. Moses, director.
Do	Colonial Dames Society, Van Cortlandt Manor (Van Cortlandt Park).	
Do	Cooper Union, Museum for the Arts of Decoration.	Mrs. Eleanor G. Hewitt, director.
Do	Hispanic Society of America (156th St., west of Broadway).	E. L. Stevenson, secretary.
Do	The Metropolitan Museum of Art	Edward Robinson, director.
Do	Museum of French Art	McDougall Hawkes, president.
Do	New York Botanical Garden (Bronx Park)	N. L. Britton, director in chief.
Do	The New York Historical Society (170 Central Park West).	
Do	New York Public Library Art Galleries and Exhibition Rooms.	Edwin H. Anderson, director.
Do	New York University	
Do	Washington Headquarters Association (Jumel Mansion).	
Niagara	Niagara University	
Poughkeepsie	Vassar College, Natural History Museum	A. L. Treadwell, curator.

XXIX.—Directors of Museums—Continued.

Location.	Name of museum or of institution controlling it.	Director.
NEW YORK—continued.		
Rochester	Bevier Memorial, Mechanics' Institute	F. von der Lancken, superintendent.
Do	Memorial Art Gallery	George L. Herdle, director.
Do	Municipal Museum	Edward D. Putnam, curator.
Do	Rochester Historical Society	Robert T. Webster, curator.
Do	University of Rochester, Geological Museum	H. L. Fairchild.
Do	University of Rochester, Zoological Museum	Chas. Wright Dodge, curator.
Do	Ward's Natural Science Establishment	Frank A. Ward, president.
Schenectady	Schenectady County Historical Society	
Do	Union College, Natural History Museum	James H. Stoller, curator.
Schoharie	Schoharie County Historical Society	Henry Cady, curator.
Skaneateles	Skaneateles Library Association, Barrow Art Gallery.	Lydia A. Cobane.
Southampton, Long Island.	Southampton Art Museum	Samuel L. Parrish, director.
Syracuse	Onondaga Historical Association (311 Montgomery St.)	Mrs. L. L. Goodrich, custodian.
Do	Syracuse Museum of Fine Arts (Syracuse Public Library Building).	Fernando A. Carter, director.
Do	Syracuse University	Charles W. Hargitt, director.
Troy	Rensselaer Polytechnic Institute	John M. Clarke, director.
Utica	Oneida Historical Society	
Waterloo	Waterloo Library and Historical Society	Lulu M. Clark.
West Point	U. S. Military Academy, Ordnance Museum	W. H. Tschappat, in charge.
Yonkers	Phillipse Manor House	
NORTH CAROLINA.		
Concord	Scotia Seminary	
Davidson	Davidson College Museum	
Durham	Trinity College	James J. Wolfe, director.
Do	Trinity College Historical Society	
Raleigh	North Carolina Hall of History	Fred A. Olds, director.
Do	North Carolina State Museum	H. H. Brimley, curator.
Tryon	Green Museum	
Do	Polk County Museum	Mrs. George E. Morton.
Wake Forest	Wake Forest College	
NORTH DAKOTA.		
Agricultural College	Agricultural College	J. H. Shepperd, vice director.
Bismarck	State Historical Society Museum	Melvin R. Gilmore, curator.
Fargo	North Dakota Art Association	Mrs. Maie Douglas Rindlaub, director.
University	University of North Dakota Museum	E. J. Babcock, director.
OHIO.		
Berea	Baldwin-Wallace College, Herman Herzer Museum.	W. N. Speckmann, curator.
Cincinnati	Cincinnati Museum	J. H. Gest, director.
Do	Cincinnati Society of Natural History (312 Broadway).	Lester D. Collier, director.
Do	Cuvier Press Club	Charles Dury, custodian.
Do	Lloyd Library and Museum	W. H. Aiken, curator.
Do	Ohio Mechanics Institutes, Industrial Museum	John F. Shearer, president.
Do	University of Cincinnati	J. Ernest Carman, assistant curator.
Cleveland	Case School of Applied Science	F. M. Comstock, curator.
Do	Cleveland Museum of Art	Frederic Allen Whiting, director.
Do	Western Reserve Historical Society	W. H. Cathcart, director.
Do	Western Reserve University	F. H. Herrick, director.
Columbus	Columbus Art Association, Columbus Gallery of Fine Arts (51 N. Monroe Ave.).	Mrs. William McClellan Ritter, president.
Do	Ohio State Archæological and Historical Society	William C. Mills, curator.
Do	Ohio State University	
Dayton	Dayton Public Library and Museum	L. Simonton, custodian.
Delaware	Ohio Wesleyan University	Lewis G. Westgate, curator.
Fremont	Sandusky County Pioneer and Historical Association.	
Greenville	Museum of Carnegie Library	Charles L. Katzenberger, curator.
Hiram	Hiram College	George H. Colton, curator.
Norwalk	Firelands Historical Society	C. H. Gallup, director.
Oberlin	Oberlin College, Geological Museum	F. O. Grover.
Do	Oberlin College, Olney Art Collection	Mrs. A. A. Wright, custodian.
Springfield	Clark County Historical Society	Elizabeth Josephine Smart, secretary.
Tiffin	Heidelberg University	M. E. Kleckner, curator.

XXIX.—DIRECTORS OF MUSEUMS—Continued.

Location.	Name of museum or of institution controlling it.	Director.
OHIO—continued.		
Toledo	Toledo Museum of Art	George W. Stevens, director.
Yellow Springs	Antioch College	
Youngstown	Mahoning Institute of Art	J. G. Butler, jr., president.
OKLAHOMA.		
Bacone	Bacone College	
Oklahoma City	Oklahoma Historical Society	W. P. Campbell, custodian.
OREGON.		
Corvallis	Oregon Agricultural College	A. B. Cordley, director.
Eugene	University of Oregon, Condon Geological Museum.	Warren D. Smith, curator.
Portland	Oregon Academy of Sciences	
Do	Oregon Historical Society	George H. Himes, curator.
Do	Portland Art Association, Museum of Art	Anna Belle Crocker, curator.
Do	Portland Free Museum	C. F. Weigand, curator.
PENNSYLVANIA.		
Allentown	Lehigh County Historical Society	Charles R. Roberts, secretary.
Do	Muhlenberg College	J. A. W. Haas.
Bradford	McKean County Historical Society	Mrs. Ada Cable.
Bryn Mawr	Bryn Mawr College	C. A. Reeds, director.
Doylestown	Bucks County Historical Society	H. C. Mercer, curator.
Easton	Lafayette College	John H. McCrackin.
Erie	Erie Public Museum	Thomas L. Austin, curator.
Germantown	Site and Relic Society of Germantown	Horace M. Lippincott.
Gettysburg	Pennsylvania College	E. S. Breidenbaugh, curator.
Harrisburg	Historical Society of Dauphin County	Mrs. L. A. Perry.
Do	Pennsylvania State Museum	Thomas Lynch Montgomery, director.
Haverford	Haverford College	Henry S. Pratt, director.
Lebanon	Lebanon County Historical Society	Charles D. Weinick.
Meadville	Allegheny College	Chester A. Darling, curator.
Meyerstown	Albright College	J. P. Sotber, curator.
New Brighton	Merrick Free Art Gallery, Museum, and Library.	Frank A. Merrick, director.
Norristown	Historical Society of Montgomery County	Frances M. Fox, curator.
Do	Regar Museum of Natural History	H. Severn Regar, curator.
Philadelphia	Academy of Natural Sciences	Samuel G. Dixon, president.
Do	Drexel Institute Museum	Hollis Godfrey.
Do	Independence Hall and National Museum	Wilfred Jordan, curator.
Do	Museum of the Grand Lodge of F. and A. M. of Pennsylvania.	Julius F. Sachse, curator.
Do	Numismatic and Antiquarian Society of Philadelphia, The Numismatic Collection.	F. D. Langenheim, curator.
Do	Pennsylvania Academy of the Fine Arts	John F. Lewis, president.
Do	Pennsylvania Museum (Memorial Hall, Fairmount Park).	Langdon Warner, director.
Do	The Philadelphia Commercial Museum (34th and Spruce Sts.).	W. P. Wilson, director.
Do	Presbyterian Historical Society, Museum and Gallery (Witherspoon Building).	Joseph B. Turner, general secretary.
Do	United States Mint, Numismatic Collection	T. L. Comparette, curator.
Do	University of Pennsylvania, The University Museum.	G. B. Gordon, director.
Do	University of Pennsylvania, Wistar Institute of Anatomy and Biology.	Milton J. Greenman, director.
Do	W. P. Wilstach Collection (Memorial Hall, Fairmount Park).	E. A. Shunk, custodian.
Do	Wagner Free Institute of Science	John G. Rothermel, director.
Do	Wister Institute of Anatomy	Milton J. Greenman, director.
Do	Zoological Society of Philadelphia, Pathological Museum.	Herbert Fox, curator.
Pittsburgh	Carnegie Institute, Department of Fine Arts	John W. Beatty, director.
Do	Carnegie Museum, Department of Carnegie Institute.	W. J. Holland, director.
Do	University of Pittsburgh	S. P. McCormick.
Pottsville	Schuylkill County Historical Society	H. E. Greger, secretary.
Reading	Historical Society of Berks County	Andrew Shaaber, librarian.
Do	Reading Public Museum	Levi W. Mengel, director.
Scranton	Everhart Museum of Natural History, Science, and Art.	R. N. Davis, curator.
South Bethlem	Lehigh University, Geological Museum	Benj. L. Miller.
State College	Pennsylvania State College	
Swarthmore	Swarthmore College	Spencer Trotter, director.
Uniontown	Fayette County Historical Society	James Hannen, custodian.
Valley Forge	Valley Forge Museum of American History	W. Herbert Burk, director.
Warren	Warren Academy of Sciences	

XXIX.—Directors of Museums—Continued.

Location.	Name of museum or of institution controlling it.	Director.
PENNSYLVANIA—contd.		
Washington	Washington and Jefferson College	
Do	Washington County Historical Society	George B. Montgomery, secretary.
West Chester	Chester County Historical Society	Gilbert Cope, secretary.
Do	West Chester State Normal School	
Wilkes-Barre	Wyoming Historical and Geological Society	Horace Edwin Hayden, librarian.
Williamsport	The James V. Brown Library	O. R. Howard Thomson, librarian.
York	York County Historical Society	Robert C. Bair, secretary.
RHODE ISLAND.		
Barrington	Barrington Historic-Antiquarian Society	Emma S. Bradford, librarian.
Newport	Newport Historical Society	Edith M. Tilley, librarian.
Providence	Annmary Brown Memorial	Frank M. Cushman, custodian.
Do	Brown University:	
	Archeology	Dr. John Shapley, curator.
	Herbarium	Dr. Harlan H. York, curator.
Do	Park Museum (Roger Williams Park)	Harold L. Madison, curator.
Do	Rhode Island Historical Society	Howard M. Chapin, librarian.
Do	Rhode Island School of Design	L. Earle Rowe, director.
Warren	Warren Antiquarian Society	Rev. Joseph Hutcheson, president.
SOUTH CAROLINA.		
Charleston	Carolina Art Association	James Simons, president.
Do	Charleston Museum	Paul M. Rea, director.
Do	Daughters of the Confederacy, Charleston Chapter.	Martha B. Washington, president.
Clemson College	Clemson College, Natural History Museum	F. H. H. Calhoun, curator.
Clinton	Thornwell Museum	Wm. P. Jacobs, curator.
Columbia	University of South Carolina	A. C. Moore.
Greenville	Furman University Museum	G. A. Buist, curator.
Newberry	Newberry College, Sifley Museum	
Spartanburg	Wofford College	D. A. Du Pre, director.
SOUTH DAKOTA.		
Pierre	South Dakota State Historical Museum	Doane Robinson, director.
Rapid City	South Dakota School of Mines	Cleophas C. O'Harra, director.
Vermilion	University of South Dakota, State Geological Museum.	Freeman Ward, curator.
TENNESSEE.		
Clarksville	Southwestern Presbyterian University	
Knoxville	University of Tennessee, Geological Museum	C. H. Gordon, director.
Lebanon	Cumberland University	Kate A. Hinds, director.
Maryville	Maryville College	
Memphis	Cossitt Library Museum Association, Cossitt Library.	Lida Speed, custodian.
Nashville	Tennessee Historical Society	
Do	Vanderbilt University	L. C. Glenn, director.
Do	Walden University, Walden Museum	Mrs. H. H. Oneal, director.
TEXAS.		
Austin	University of Texas, Museum of Economic Geology.	J. A. Udden, director.
Dallas	Dallas Art Association	J. B. Martin, custodian.
Fort Worth	Fort Worth Museum of Art (Carnegie Library)	Mrs. Charles Scheuber, secretary.
Houston	Houston Museum	C. L. Brock, director.
Do	Rice Institute	
Do	Houston Art League (City Hall)	Mrs. George Heyer, president.
San Antonio	Scientific Society of San Antonio	Edward Heusinger, secretary.
Waco	Baylor University	John Kern Strecker, jr., curator.
UTAH.		
Salt Lake City	Deseret Museum	James E. Talmage, director.
Do	Utah Art Institute	Edwin Evans, president.
Do	University of Utah	Orson Howard, curator.
VERMONT.		
Burlington	University of Vermont	G. H. Perkins, curator.
Middlebury	Middlebury College, Museum of Natural History	Avery E. Lambert, director.

XXIX.—DIRECTORS OF MUSEUMS—Continued.

Location.	Name of museum or of institution controlling it.	Director.
VERMONT—continued.		
Montpelier	Vermont Historical Society	Dorman B. E. Kent, librarian.
Do	Vermont State Museum	George H. Perkins, curator.
St. Johnsbury	The Fairbanks Museum of Natural Science	Mabel A. Shields, curator.
Westfield	Hitchcock Memorial Museum	E. S. Miller, curator.
VIRGINIA.		
Blacksburg	Virginia Polytechnic Institute	Ellison A. Smyth, jr., director.
Charlottesville	University of Virginia, Lewis Brooks Museum	Thomas L. Watson, director.
Emory	Emory and Henry College	
Lexington	Washington and Lee University	H. D. Campbell, director.
Richmond	Confederate Museum (White House of the Confederacy).	Susie B. Harrison, house regent.
Do	Department of Agriculture and Immigration	
Do	R. E. Lee Camp, No. 1, Confederate Veterans	A. S. Baird, acting commandant.
Do	Richmond College	C. H. Ryland, curator.
Do	The Valentine Museum	E. V. Valentine, president.
WASHINGTON.		
Pullman	State College of Washington	W. T. Shaw, curator.
Seattle	University of Washington, State Museum	F. S. Hall, curator.
Do	Seattle Fine Arts Society	E. G. Berg, director.
Tacoma	Ferry Museum	
Do	Tacoma Academy of Science	
WISCONSIN.		
Appleton	Lawrence College Museum	Rufus Mather Bagg, curator.
Ashland	Ashland public schools	
Baraboo	Sauk County Historical Society	H. E. Cole, president.
Beaver Dam	W. E. Snyder Museum	W. E. Snyder, owner.
Beloit	Beloit College, Logan Museum	Ira M. Buell, curator.
Darlington	Lafayette County Historical Society	P. H. Conley, president.
La Crosse	La Crosse Normal School	Albert H. Sanford, custodian.
Madison	G. A. R. Memorial Hall	Hosea Rood, custodian.
Do	State Historical Museum of Wisconsin	Charles E. Brown, chief.
Do	University of Wisconsin	
Milton	Milton College	A. R Crandall, director.
Milwaukee	Milwaukee Downer College, Greene Memorial Museum.	Margaret L. Campbell, curator.
Do	Layton Art Gallery	George Raab, curator.
Do	Public Museum of the City of Milwaukee	Henry L. Ward, director.
Platteville	State Mining School	R. E. Davis, director.
Portage	Portage Public Library	
Racine	Racine Public Library	
Ripon	Ripon College	Frank M. Erickson, dean.
St. Francis	St. Francis Seminary, Salzmann Museum	William Metzdorf, director.
Waupun	Waupun Public Library	
WYOMING.		
Laramie	University of Wyoming	S. H. Knight, curator.

XXX.—LIBRARIANS OF PUBLIC AND SOCIETY LIBRARIES.

Location.	Name of library.	Librarian.	Number bound volumes.
ALABAMA.			
Bessemer	Carnegie Library	Mrs. Nora Golson	7,066
Birmingham	Public Library	Carl H. Milam	58,098
Decatur	Carnegie Library	Louise Leadingham	3,900
Ensley	Public Library	Fanny T. Taber	4,900
Eufaula	Carnegie Library	Mrs. Willa E. Barron	4,820
Fairhope	Public Library	Mrs. L. J. M. Coming	4,000
Florence	Southern Library Association Library.	Mrs. G. H. Smith, acting	6,300

XXX.—Librarians of Public and Society Libraries—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
MA—continued.			
	Public Library	Lena Martin	6,200
lle	Carnegie Library	Mrs. J. L. Darwin	3,755
	Public Library	Miss M. L. Fisher	3,000
nery	Carnegie Library	Laura M. Elmore	11,900
	State and Supreme Court Library.	J. M. Riggs	48,231
	Carnegie Library	Bettie Keith	6,816
a	Public Library	Mrs. Marie Fechet Kilburn	9,971
	Carnegie Library	J. A. Boyd	4,523
bia	Helen Keller Library	Mrs. J. B. McWilliams	6,581
prings	Public Library	Mollie Norman	2,590
ARIZONA.			
	Copper Queen Library	Carrie G. Vail	8,650
	Public Library	Mrs. Kate A. Goodrich	5,200
	....do	Mrs. M. C. Wischart	1,850
	Old Dominion Library	Dayton W. Ennes	8,000
	Public Library	Maude L. Hiatt	18,024
	State Library	Con P. Cronin	105,000
	Public Library	Mrs. Florence G. Emerson	2,500
	Carnegie Free Library	Mrs. Mary Brethitt	16,000
RKANSAS.			
ville	Public Library	Lila G. Rollston	3,000
ith	Carnegie City Library	Ethel B. Kellar	8,093
ock	Public Library	Beatrice Prall	29,000
	....do	Mrs. Ida H. Robbins	4,500
uff	....do	Mrs. D. C. Wilcox	1,944
	New Subiaco Abbey Library	Vincent Orth	12,000
na	Y. M. C. A. Library	A. Roy Bartrein	8,000
ALIFORNIA.			
	Free Library	Mrs. Marcella H. Krauth	53,877
ra	Public Library	Mrs. Theodora R. Brewitt	18,600
eld	Beale Memorial Free Public Library.	Sarah E. Bedinger	27,883
	Kern County Free Library	Mrs. Julia G. Babcock	52,000
	Public Library	Celia A. Hayward	70,474
	....do	Laura A. Sawyers	7,866
ista	Free Public Library	Kathryn E. Burke	1,755
	Public Library	Mrs. Anna E. Spragins	8,445
	....do	Belle Crane	5,307
	....do	Helen L. Coffin	7,603
o	....do	Anna Allsebrook	7,161
	....do	Mrs. Henrietta M. Faulder	8,656
o	Imperial County Free Library	Mrs. Thomas Beeman	15,937
	Public Library	Agnes F. Ferris	7,987
	Free Library	Henry A. Kendal	11,041
	Humboldt County Free Library	Ida M. Reagan	15,047
	Carnegie Library	Mrs. A. O. Woodworth	1,315
	Solano County Free Library	Clara B. Dills	16,751
	County Free Library	Sarah E. McCardle	105,061
alley	Public Library	Mrs. O. M. Parsons	4,121
	Free Public Library	Eunice D. Steele	7,269
	Kings County Free Library	Katherine Post Ferris	34,000
d	Free Library	Elizabeth Creelman	5,612
	Free Public Library	Mrs. Allison Aylesworth	3,653
dence	Inyo County Free Library	Blanche Chalfant	9,115
ach	Public Library	Zaidee Brown	50,402
eles	Los Angeles County Free Library	Celia Gleason	186,812
	Public Library	Everett R. Perry	335,215
os	....do	Mrs. M. C. Proctor	8,290
	Madera County Free Library	Mary E. Glock	25,935
	Contra Costa County Free Library.	Mrs. Alice G. Whitbeck	42,263
lle	City Library	Mary E. Subers	9,000
	Merced County Free Library	Winifred H. Bigley	35,414
	Stanislaus County Free Library	Cornelia D. Provines	23,112
a	Public Library	Anne L. Crews	8,000
	Goodman Public Library	C. B. Seeley	15,000
l City	Public Library	Winifred F. Woods	6,779
City	Free Public Library	Mrs. Melissa Fuller	5,000
	Free Library	Charles S. Greene	154,037
	Alameda County Library	Mary J. Barmby	45,714
le	Public Library	H. D. Brodie	7,688

XXX.—LIBRARIANS OF PUBLIC AND SOCIETY LIBRARIES—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
CALIFORNIA—continued.			
Ontario	Public Library	Miss K. A. Monroe	10,142
Orange	Free Public Library	Clara C. Field	8,000
Oroville	Butte County Free Library	Essae M. Culver	21,927
Oxnard	Public Library	Ethel Carroll	9,648
Pacific Grove	do	Elizabeth S. Jones	8,125
Palo Alto	do	Frances D. Patterson	13,035
Pasadena	do	Nellie M. Russ	65,215
Petaluma	do	Sara Frances Cassiday	11,455
Pomona	do	Sarah M. Jacobus	37,137
Red Bluff	Herbert Kraft Free Library	Alice Gardiner	5,035
Redlands	A. K. Smiley Public Library	Artena M. Chapin	32,655
Richmond	Public Library	Norah McNeill	20,938
Riverside	do	Joseph F. Daniels	65,317
Sacramento	City and County Library	Lauren W. Ripley	130,000
Do	State Library	Milton J. Ferguson	270,000
Salinas	Monterey County Free Library	Anne Hadden	19,817
San Bernardino	Public Library	May Coddington	19,357
Do	San Bernardino County Free Library.	Caroline S. Waters	28,743
San Diego	Public Library	Althea H. Warren	79,464
Do	San Diego County Free Library	Jennie Herrman	32,804
San Francisco	Public Library	Robert Rea	212,807
San Jose	Free Public Library	Charles F. Woods	28,754
Do	Santa Clara County Free Library.	Stella Huntingdon	29,000
San Luis Obispo	Free Public Library	Mrs. E. L. Kellogg	12,637
San Mateo	Public Library	Inez M. Crawford	11,083
San Rafael	do	May Cooper	11,385
Santa Ana	Free Public Library	Jeanette E. McFadden	18,926
Santa Barbara	do	Mrs. Frances B. Linn	54,385
Santa Cruz	Public Library	Minerva H. Waterman	30,000
Santa Monica	do	Elfie A. Mosse	27,000
Santa Rosa	Free Public Library	Margaret A. Barnett	29,720
Sierra Madre	Public Library	Marian S. Gregory	7,104
South Pasadena	do	Mrs. Nellie E. Keith	16,400
Stockton	Free Public Library	Hattie M. Mann	76,508
Tulare	do	Mrs. Rosa D. Reardon	7,865
Vallejo	Public Library	L. Gertrude Doyle	13,364
Ventura	do	Florence Vandever	6,118
Visalia	Free Library	Mrs. M. J. McEwen	6,700
Do	Tulare County Free Library	Mrs. Bessie H. Twaddle	36,911
Watsonville	Carnegie Public Library	Belle M. Jenkins	8,350
Whittier	Public Library	Jessie Harris	13,311
Willows	Glenn County Free Library	Mrs. Mary P. Smith	9,000
Woodland	Yolo County Free Library	Eleanor Hitt	23,617
Yreka	Siskiyou County Free Library	Bessie B. Silverthorn	20,000
COLORADO.			
Alamosa	Carnegie Library	Mrs. Bertha E. Roberts	3,528
Boulder	Public Library	Lena R. Fenton	9,029
Canon City	do	Katherine Sortor	8,000
Colorado Springs	do	Lucy W. Baker	35,000
Denver	do	Chalmers Hadley	192,398
Do	State Library	Mary C. C. Bradford	60,000
Durango	Public Library	Sadie K. Sullivan	9,291
Eaton	do	Edith L. Coffman	2,900
Evergreen	do	Julia B. Douglas	1,800
Florence	do	Jessie M. Ludwick	2,788
Fort Collins	do	Elfreda Stebbins	13,000
Fort Morgan	Carnegie Public Library	Mrs. Estella M. McCutcheon	4,000
Grand Junction	do	Camille Wallace	7,000
Greeley	Public Library	Edna A. Wilson	13,000
Idaho Springs	Carnegie Public Library	Mrs. Margaret Robins	5,000
La Junta	Young Folks Library	Fannie P. Shank	20,070
Lamar	Carnegie Library	Josephine Silver	3,100
Leadville	Public Library	Louise S. Adams	6,439
Longmont	do	Rebecca Day	5,348
Loveland	Carnegie Library	Mrs. Anna Duffield	4,700
Manitou	do	Clotilde Reichmuth	3,327
Montrose	do	Mrs. Anna L. Christiansen	3,000
Ouray	Walsh Public Library	Mrs. Minnie M. Nowlan	8,960
Pueblo	McClelland Public Library	Mary L. Strang	30,000
Rocky Ford	Public Library	Mary L. Weaver	4,600
Salida	do	Mrs. H. I. Cook	5,905
Trinidad	do	Andrew J. Floyd	10,124

XXX.—Librarians of Public and Society Libraries—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
NNECTICUT.			
	Public Library	Anne G. Richards	25,000
l	Blackstone Memorial Library	Charles N. Baxter	36,872
rt	Public Library	Henry N. Sanborn	72,387
	do	Charles L. Wooding	35,637
	Douglas Library	Mrs. Nellie A. Preston	6,000
	Public Library	Mary E. Baldwin	7,100
er	Cragin Memorial Library	Mary A. Leal	6,500
a	Saxton B. Little Free Library	Lillian W. Rice	6,950
l	Library Association	Mary J. Whitney	5,797
y	Danbury Library	Mary P. Wiggin	24,775
n	Free Public Library	E. R. Warren	10,000
	Free Library Association	Clara Scofield	7,000
	Derby Neck Library	Mary A. Hurley	16,400
	Public Library	Emma E. Vessey, acting	21,126
Center	Durham Public Library	Mrs. Albert L. Hall	6,398
rtford	Public Library	Jessie W. Hayden	10,200
n	Hall Memorial Library	Alice E. Pinney	6,800
	Memorial Library	Florence J. Burr	9,543
ton	Village Library	Mrs. T. H. Root	9,000
ch	Greenwich Library	Ella M. Brush	11,000
	Bill Memorial Library	Abby M. Clarke	7,220
l	Case Memorial Library	Charles S. Thayer	111,167
	Public Library	Caroline M. Hewins	135,000
	State Library	George S. Godard	200,000
ld	Wolcott and Litchfield Circulating Library.	Katharine Baldwin	14,200
	Phoebe Griffin Noyes Library	Bessie Connolly	8,221
	E. C. Scranton Memorial Library	Evelyn Meriwether	10,327
	Curtis Memorial Library	Corinne A. Deshon	24,830
eld	Levi E. Coe Public Library	Alice Watrous	6.500
wn	Russell Library	Edna H. Wilder	20,000
	Taylor Library	Howard C. Meserve	13.000
	East Haddam Public Library	Myra C. Sweet	8,000
	Mystic and Noank Library	Genevra E. Ricker	7,354
ck	Howard Whittemore Memorial Library.	E. M. Goodyear	14,187
tain	New Britain Institute	Anna G. Rockwell	75,000
naan	New Canaan Library	Stella Waters	10,721
ven	Free Public Library	Willis K. Stetson	138,000
ndon	Public Library	Frederick W. Edgerton	38,503
ford	do	Elizabeth H. Noble	11,800
n	Beach Memorial Library	Abbie L. Peck	5,500
	Norfolk Library	Charles B. Uffendale	20,700
ld	Gilbert Library	Wallace Humiston	5,000
ranby	Frederick H. Cossitt Library	Helen M. Shaw	8,084
	Public Library	Dotha Stone Pinneo	13.109
	Otis Library	Imogene A. Cash	43.000
	Peck Library	Helen Marshall	17,500
brook	Acton Library	Sarah G. Granniss	7,908
	Pomfret Library	M. L. Harvey	7,600
l	Buck Library	Frances P. Robinson	6.951
	Free Public Library	Emma J. Kinney	7,200
ld	Ridgefield Library	Jennie Smith	10,114
le	Public Library	Edith M. Peck	11,482
y	Scoville Memorial Library	Charlotte B. Norton	11,739
r	Public Library	Mrs. Edyth M. Adams	8.049
	Hotchkiss Memorial Library	Mary C. Mackey	7.870
	Plumb Memorial Library	Jessamine Ward	16,419
y	Free Library	Carrie L. MacRoy	13.300
anchester	do	Louise L. Bartlett	12,687
orwalk	Public Library	Mrs. Agnes L. Blanchard	13,446
gton	do	Mrs. Charles H. Bissell	7,107
rt	Pequot Library	Gertrude Whittemore	42,255
Springs	Stafford Public Library	Mabel G. Meyers	7.340
d	Ferguson Library	Alice M. Colt	32,922
on	Free Library	Mrs. K. Hahn	7,000
l	Library Association	Frances B. Russell	17,622
	Kent Memorial Library	Madeline H. Spencer	19,300
ton	Public Library	Martha E. Potter	6.301
onville	Enfield Public Library	Lillian V. Baily	7,582
on	Torrington Library	Louise T. Mason	14,000
lle	Raymond Library	Lucy P. Scholfield	6,400
ford	Public Library	Minnie E. Gedney	15,000
gton	Gunn Memorial Library	Fanny P. Brown	5,989
ry	Silas Bronson Library	Helen Sperry	103,624
wn	Library Association	Jennie M. Smith	9,736
t	Public Library	Mrs. Edith V. Sherwood	9,000
field	do	Belle Brigham	7,000

XXX.—LIBRARIANS OF PUBLIC AND SOCIETY LIBRARIES—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
CONNECTICUT—continued.			
Willimantic	Dunham Hall Library	Mrs. Hattie B. Gates	6,534
Do	Public Library	Bell B. Riggleman	9,000
Winsted	Beardsley Library	Dorothy Whiting	14,369
DELAWARE.			
Dover	State Library	Earle D. Willey	80,000
New Castle	New Castle Library	Ruth E. Stewart	7,000
Odessa	Corbit Library	May C. Enos	7,000
Wilmington	Wilmington Institute Free Library.	Arthur L. Bailey	80,162
DISTRICT OF COLUMBIA.			
Washington	Library of Congress	Herbert Putnam	2,537,922
Do	Pan American Union (Columbus Memorial Library).	Charles E. Babcock	40,000
Do	Peabody Library	Eva Nelson Gilbert	9,000
Do	Public Library	George F. Bowerman	206,994
Do	U. S. Department of Agriculture	Claribel R. Barnett	145,000
Do	Weather Bureau	C. Fitzhugh Talman	37,000
	U. S. Department of Commerce	Anne G. Cross	108,000
Do	Bureau of Fisheries	Rose M. MacDonald	29,000
Do	Bureau of Standards	A. Fanti	16,339
Do	Coast and Geodetic Survey	William A. Masker, jr	14,000
	U. S. Department of the Interior:		
Do	Bureau of Education	John D. Wolcott	175,000
Do	Bureau of Mines	Mrs. Edith Spofford	5,500
Do	Geological Survey	Julia L. V. McCord	130,000
Do	Patent Office	H. H. Brogan	78,400
Do	U. S Department of Justice	George Kearney	50,000
Do	U. S. Department of Labor	Laura A. Thompson	50,000
Do	U. S. Department of the Navy	Charles W. Stewart	75,000
Do	Naval Observatory	William D. Horigan	29,657
Do	U. S. Department of State, Bureau of Rolls and Library.	John A. Tonner	79,000
Do	U. S. Department of the Treasury.	Emma M. V. Triepel	10,416
Do	Bureau of Public Health Service.	D. S. Masterson	7,500
Do	Office of Solicitor of the Treasury.	James S. Maddux	7,000
	U. S. Department of War:		
Do	Army War College	Maj. J. R. M. Taylor	200,000
Do	Surgeon General's Office	Lieut. Col. C. C. McCulloch, jr	200,000
Do	U. S. Federal Board for Vocational Education.	Isabel L. Towner	1,550
Do	U. S. House of Representatives	H. C. McCarthy	500,000
Do	U. S. Interstate Commerce Commission.	Leroy S. Boyd	14,000
Do	U. S. Public Documents Library	Sarah Ambler	240,000
Do	U. S. Senate Library	Edward C. Goodwin	250,000
Do	U. S. Smithsonian Institution	Paul Brockett	300,000
Do	Bureau of American Ethnology.	Ella Leary	22,175
Do	U. S. Soldiers' Home Library	Mary E. Schick	15,000
FLORIDA.			
Bartow	Public Library	S. S. Green	3,980
Clearwater	do	Margaret L. Duncan	4,128
Deland	do	Mrs. H. E. Gaulden	3,000
Jacksonville	do	Lloyd W. Josselyn	51,000
Ocala	do	Louise Gamsby	4,336
St. Augustine	Free Public Library	Elizabeth Monk	9,200
St. Petersburg	Public Library	Emma M. Williams	5,100
Sarasota	Sarasota Library	Nellie Speirs	3,000
Tampa	Public Library	Helen V. Stelle	10,300
West Tampa	Free Public Library	Rita Castello	2,072
GEORGIA.			
Americus	Carnegie Library	Virginia Gunn	4,500
Atlanta	do	Tommie Dora Barker	97,076
Do	State Library	Mrs. Maud B. Cobb	70,358
Columbus	Public Library	Mrs. C. L. Gordy	13,409
Cordele	Carnegie Library	Louise O. Bercaw	4,730
Dublin	Public Library	Lily Hightower	4,425
Fitzgerald	do	Louisa Smith	3,400

XX.—Librarians of Public and Society Libraries—Continued.

ation.	Name of library.	Librarian.	Number bound volumes.
-continued.			
	Hawkes' Free Library	Martha A. Kendrick	1,875
	Price Free Library	Minnie F. Rice	7,000
	Clarke Library Association	Mabel C. Cortelyou	7,000
	Carnegie Library	Mrs. Nettie Wilson	4,734
	....do	Katherine Powel	9,516
	Public Library	Helen Eastman	5,900
	....do	C. Seymour Thompson	25,000
	....do	Mary H. Hansell	5,000
	Carnegie Library	Ruth Credille	4,632
	Mary Willis Library	Mrs. Hardman T. Wood	12,000
AHO.			
alls	Public Library	Della Reed	2,800
	Carnegie Public Library	Marion Dahl	22,700
	Idaho Free Traveling Library	Marie M. Schrieber	18,000
	State Law Library	Mrs. Stella B. Balderstone	30,000
	Free Public Library	Lalla Bedford	4,400
ne	Public Library	Helene G. Norton	5,000
	....do	Marion Orr	3,677
	Carnegie Library	Margaret G. Guyer	10,000
	Public Library	Mary Duggan	5,400
	Carnegie Public Library	Alice B. Madden, acting	3,166
	Public Library	Jessie Fraser	4,000
	....do	Mrs. Addie R. Carpenter	6,000
	Outlook Public Library	Olive Lacey	2,150
NOIS.			
	Jennie D. Hayner Library Association.	Harriet C. Dolbee	15,000
	Public Library	James Shaw	36,816
	....do	Cassie W. Stephens	10,069
	....do	A. M. Wolleson	32,893
	Ida Public Library	Elizabeth Ballard	12,785
n	Withers Public Library	Nellie E. Parham	30,000
	Public Library	Louise Denton	8,435
	....do	Mrs. L. L. Powell	21,700
	Township Public Library	Mrs. Elizabeth Hawks	8,000
	Parlin Public Library	Mrs. Josephine H. Resor	10,785
	Free Public Library	Mrs. Elizabeth E. Pennock	7,276
	Public Library	Celia M. Miles	7,400
	....do	Ethel G. Kratz	23,307
	Carnegie Library	Margaret A. Gramesly	8,500
	John Crerar Library	Clement W. Andrews	391,356
	Municipal Reference Library	Frederick Rex	30,213
	Newberry Library	W. N. C. Carlton	378,148
	Public Library	Carl B. Roden	885,000
ghts	....do	Sarah Driver	9,500
	Chillicothe Township Free Public Library.	Gladys E. Carroll	2,425
	Vespasian Warner Public Library.	Lillian Kent	13,488
	Public Library	Josephine E. Durham	35,159
	Free Public Library	Mrs. Alice G. Evans	39,450
	Haish Library	Josephine M. Jandell	22,433
	Public Library	Mary F. Wynn	17,902
	....do	Fanny M. Burlingame	6,463
ils	....do	J. Lyon Woodruff	31,156
le	Free Public Library	Sarah Coventry	4,000
	Gail Borden Public Library	Katherine L. Abbott	51,000
	Public Library	Marcus Skarstedt	61,618
	Dominy Memorial Library	Hazel M. Tucker	6,000
	Public Library	Harriet Lane	40,575
	....do	Ava E. Hurst	9,626
	....do	Anna F. Hoover	50,094
	....do	Ella L. Sawyer	13,726
	....do	Gertrude E. Aiken	7,200
	Douglas Township Library	Eleanor R. Jones	4,053
	Public Library	Mary Gibbs	4,000
	Delos F. Diggins Library	Ida L. Gehrig	6,007
	Public Library	Sarah Daniels	3,900
ark	....do	Helen Flinn	11,210
	....do	Mrs. Ella F. Ruth	7,619
	....do	Ellen G. True	9,912
	....do	Lydia M. Barrette	22,962
	....do	Mrs. Rena M. Barickman	47,088
	....do	Rose M. Mather	12,098
	....do	Eva Cloud	16,000

XXX.—LIBRARIANS OF PUBLIC AND SOCIETY LIBRARIES—Continued

Location.	Name of library.	Librarian.	Number bound volumes.
ILLINOIS—continued.			
Knoxville	Public Library	Mrs. Charity A. Penn	8,913
La Grange	Free Public Library	Louise E. DeWitt	8,330
Lake Forest	Public Library	Frances E. Kemp	13,9[illegible]
La Salle	do	Kathryne G. Coleman	14,000
Lincoln	do	Ida M. Webster	16,000
Litchfield	Free Public Library	Mary D. Wallace	4,000
Macomb	do	Mahala Phelps	12,5[illegible]4
Marion	Carnegie Library	Mary Goodall	2,986
Mattoon	Public Library	Blanche Gray	10,065
Maywood	do	Grace M. Rogers	8,158
Mendota	Graves Public Library	Sadie E. Wilcox	8,000
Minonk	Filger Library	Edith H. Ford	4,150
Moline	Public Library	Minnie Kohler	26,088
Monticello	Allerton Public Library	Lena Bragg	7,287
Morrison	Odell Public Library	Anna E. Corcoran	6,030
Naperville	Nichols Library	Mary B. Egermann	5,816
Oak Park	Public Library	Helen A. Bagley	33,540
Olney	Carnegie Library	Cora Belle Morris	5,992
Onarga	Free Public Library	Charlotte M. Amerman	6,000
Ottawa	Reddick's Public Library	Vera J. Snook	15,113
Pana	Public Library	Mrs. Nellie C. Russell	7,417
Paris	do	Cressie F. Strimple	11,125
Paxton	Carnegie Library	Emma Meharry	8,039
Pekin	Public Library	Anna M. Smith	11,751
Peoria	do	S. P. Prowse	124,337
Pittsfield	do	Lulu Quinby	5,917
Plano	Little Rock Township Public Library.	Mrs. Maude E. Henning	8,219
Polo	Buffalo Township Public Library.	F. Frances Barber	6,287
Pontiac	Public Library	Nell Thornton	10,238
Princeton	Matson Public Library	Agnes M. Robinson	9,914
Quincy	Free Public Library	Margaret Ringier	37,223
Rock Island	Public Library	Ellen Gale	30,305
Rockford	do	Jane P. Hubbell	75,083
Rockton	Talcott Free Library	Mary C. Forward	5,985
Savanna	Public Library	Hattie L. Greve	5,595
Shelbyville	Free Public Library	Eva J. Davis	9,486
Spring Valley	Public Library	Mrs. Mary Rees	3,940
Springfield	Lincoln Library	Henry C. Remann	73,165
Do	State Library	Mrs. Eva May Fowler	70,000
Sterling	Public Library	Sadie F. Murphy	10,500
Streator	do	Mrs. Mary L. Wright	21,546
Sycamore	do	Julia S. Osborne	7,080
Taylorville	do	Aline E. Emery	8,593
Urbana	Free Public Library	Ida B. Hanes	23,000
Warren	do	Mrs. R. D. Spofford	6,023
Warsaw	do	Mrs. Clara M. Mills	7,135
Watseka	Public Library	Lillian Barnes	6,000
Waukegan	do	Laura J. Perrin	9,000
Wheaton	Adams Memorial Library	Emma Boyd	6,979
Wilmette	Free Public Library	Anna E. Law	7,626
Winnetka	Public Library	Mary E. Hewes	10,493
Woodstock	do	Lura M. Wandrack	5,974
INDIANA.			
Alexandria	Public Library	Jennie Henshaw	5,27[illegible]
Anderson	Carnegie Public Library	Mabel A. Wayne	20,000
Aurora	Public Library	Constance L. Wilder	5,565
Bedford	do	Georgia A. Friedley	11,88[illegible]
Bloomington	do	Mary L. Blair	6,[illegible]3[illegible]
Bluffton	do	Nannie W. Jayne	10,17[illegible]
Brazil	do	Agnes McCrea	9,500
Carlisle	do	Mrs. Luella B. Wagner	2,500
Carthage	Henry Henley Public Library	Mattie Clark	5,835
Columbia City	People's Free Library	Jessie H. Faust	12,000
Columbus	Public Library	A. J. Diploye	14,500
Connersville	do	Isabel Ball	7,500
Crawfordsville	do	Susan K. Beck	14,415
Danville	do	Lou Robinson	6,600
Decatur	do	Annette L. Moses	8,000
Elkhart	Carnegie Library	Ella F. Corwin	24,894
Elwood	Public Library	Elizabeth McMullen	13,700
Evansville	do	Ethel F. McCollough	41,794
Do	Willard Library	Otilda Goslee	4,000
Fort Wayne	Public Library	Margaret M. Colerick	72,985
Frankfort	do	Olive Brumbaugh	10,927
Franklin	do	Leila B. Wilcox	5,906

XXX.—Librarians of Public and Society Libraries—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
INDIANA—continued.			
Gary	Public Library	Louis J. Bailey	70,341
Goshen	Carnegie Public Library	Elizabeth L. Rockwell	16,381
Greencastle	....do	Belle S. Hanna	12,130
Greenfield	Public Library	Mrs. Catherine G. Poulson	7,320
Greensburg	Carnegie Public Library	Frank P. Montfort	8,857
Hammond	Public Library	Mrs. Jeanie L. Sawyer	24,225
Hartford City	....do	Minta B. Fordney	13,338
Huntington	City Free Library	Winifred F. Ticer	26,000
Indianapolis	Public Library	Charles E. Rush	221,185
Do	State Library	Demarchus C. Brown	79,480
Jeffersonville	Township Public Library	Bertha F. Poindexter	9,941
Kokomo	Carnegie Public Library	Mrs. Dana H. Sollenberger	14,661
Lafayette	Public Library	Mrs. Virginia Stein	31,160
La Porte	....do	Mrs. Jennie B. Jessup	22,516
Lebanon	....do	Mrs. Cora O. Bynum	12,577
Linton	....do	Mrs. Margaret McGauhy	4,700
Logansport	....do	Alice D. Stevens	20,000
Madison	....do	Nellie G. Harper	9,000
Marion	....do	Daisy Springer	33,563
Michigan City	....do	Amalia Aicher	15,000
Mishawaka	....do	Lyndell Martling	6,944
Montpelier	....do	Mrs. Marian P. Watts	7,843
Mount Vernon	Alexandrian Free Public Library.	Annabel Highman	7,871
Muncie	Public Library	Mary Torrance	38,000
New Albany	....do	Annette L. Clark	25,000
Peru	....do	Gertrude H. Thiebaud	15,213
Portland	Carnegie Free Library	Mary E. Boltin	7,860
Princeton	Public Library	Julia A. Mason	14,146
Rensselaer	....do	Antoinette Price	10,000
Rochester	....do	Grace Stingly	7,309
Seymour	....do	Katherine Frazee	7,500
Shelbyville	Carnegie Public Library	Ida A. Lewis	13,753
South Bend	Public Library	Virginia M. Tutt	40,000
Terre Haute	Emeline Fairbanks Memorial Library.	Mrs. Sallie C. Hughes	58,000
Tipton	Public Library	Mrs. Sam Matthews	7,500
Union City	....do	Jessie L. Kerr	6,653
Valparaiso	....do	Bertha Joel	8,059
Vincennes	....do	Ella Davidson	13,141
Wabash	Carnegie Library	Effie Roberts	*8,856
Warsaw	Warsaw and Wayne Township Library.	Miriam Netter	5,928
Washington	Carnegie Public Library	Mary E. Waller	11,602
Whiting	Public Library	Louise Randall	14,000
IOWA.			
Albia	Public Library	Mrs. Laura M. Duncan	5,780
Algona	Free Public Library	Gertrude I. Sheridan	6,754
Ames	Public Library	Kittie B. Freed	11,131
Anamosa	....do	Elsie J. Remley	5,447
Atlantic	Carnegie Free Public Library	Mary N. Adams	7,150
Belmond	Public Library	Mrs. Annie B. Case	1,700
Boone	Ericson Public Library	Bessie Moffatt	16,244
Burlington	Free Public Library	Miriam B. Wharton	45,000
Cedar Falls	Public Library	Eunice H. Overman	9,045
Cedar Rapids	Iowa Masonic Library	Newton R. Parvin	30,000
Do	Public Library	E. Joanna Hagey	40,000
Centerville	Drake Free Public Library	Anna G. Gault	10,000
Chariton	Free Public Library	Helen M. Grafton	4,586
Charles City	Public Library	Belle Caldwell	10,000
Cherokee	....do	Lucile Ralston	8,678
Clarinda	....do	Irene Burwell	10,771
Clinton	Free Public Library	Anna M. Tarr	25,275
Corning	....do	Idelle Riddile	6,290
Council Bluffs	....do	Ione Armstrong	34,000
Davenport	Public Library	Grace D. Rose	52,000
Des Moines	....do	Forrest B. Spaulding	100,677
Do	State Library	Johnson Brigham	153,460
Dubuque	Carnegie Stout Library	Almira R. Wilcox	40,000
Eldora	Public Library	Mrs. M. E. Wheelock	7,500
Estherville	Free Public Library	Sade M. Davidson	8,261
Fairfield	....do	H. M. Dysart	27,874
Fort Dodge	Public Library	Isabella C. Hopper	18,336
Fort Madison	Cattermole Memorial Library	Rebecca Hesser	9,000
Grinnell	Stewart Library	Jane Kuhns	12,889
Hampton	Public Library	Mary E. Kingsbury	6,108

XXX.—LIBRARIANS OF PUBLIC AND SOCIETY LIBRARIES—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
IOWA—continued.			
Independence	Free Public Library	Minnie Markham	6,742
Indianola	Public Library	Mary E. McCoy, acting	10,517
Iowa City	do	Helen McRaith	18,324
Jefferson	do	Mary G. Barney	5,000
Keokuk	do	Nannie P. Fulton	25,584
Le Mars	do	Mae Smith	7,000
Malvern	do	Ruth Roberts	2,415
Manchester	Carnegie Library	Margaret Lindsay	8,150
Maquoketa	Free Public Library	Ida M. Simpson	10,421
Marion	Carnegie Library	Katherine M. Peirce	6,218
Marshalltown	Public Library	Anna Maude Kimberly	18,600
Mason City	do	Mrs. Bertha S. Baird	17,640
Mount Pleasant	Free Public Library	Elena E. Budde	15,162
Muscatine	P. M. Musser Public Library	Ellen G. Stocker	15,856
Nevada	Public Library	Alice Lewis	7,300
Newton	Free Public Library	Elizabeth McB. King	11,274
Onawa	Public Library	Helen E. Allen	10,000
Osage	Sage Public Library	Rena Gray	6,782
Oskaloosa	Free Public Library	Rachel B. Forbush	13,000
Ottumwa	Public Library	May B. Ditch	37,088
Pella	Carnegie-Viersen Library	Leona Renvers	8,123
Perry	Free Public Library	Flora B. Bailey	8,405
Shenandoah	Public Library	Berdena Jay	8,666
Sioux City	Free Public Library	Clarence W. Sumner	47,574
Tipton	Carnegie Public Library	Helen R. Schriver	8,267
Vinton	Public Library	Elizabeth F. Williams	9,660
Washington	Jane A. Chilcote Library	Eva G. Denny	9,736
Waterloo	Public Library	Maria C. Brace	29,000
Webster City	Kendall Young Library	E. D. Burgess	13,334
Winterset	Public Library	Mary Cassidy	9,690
KANSAS.			
Abilene	Free Public Library	Lida Romig	7,058
Anthony	Free Public Library and Reading Room.	Lora Orr	3,500
Arkansas City	Public Library	Mrs. Mary E. Ranney	7,100
Atchison	do	Mrs. Leontine Scofield	11,695
Burlington	Carnegie Free Public Library	Mrs. Della Hall	7,000
Chanute	Public Library	Myrtle Johnson	10,864
Coffeyville	do	Elizabeth J. Hull	7,900
Concordia	Free Public Library	Anna M. Shafer	6,500
El Dorado	Carnegie Library	Mildred Kilgore	3,500
Emporia	Free Library	Mildred Berrier	16,000
Fort Scott	Public Library	Mary L. Barlow	7,565
Great Bend	do	Bina Deighton	5,300
Hiawatha	Morrill Free Public Library	Rebecca D. Kisser	16,000
Hutchinson	Public Library	Ida Day	10,200
Independence	do	Anna M. Gemmell	9,709
Junction City	George Smith Public Library	Mary H. Barker	11,382
Kansas City	Public Library	Sara J. Greenman	36,251
Lawrence	Free Public Library	Virginia S. Edwards	14,980
Leavenworth	do	T. R. Temple	25,000
Manhattan	Carnegie Free Public Library	Mary Cornelia Lee	8,500
Newton	Free Library	Lydia A. McGaughey	7,474
Oswego	Free Public Library	Mrs. C. M. Wiley	4,000
Ottawa	Carnegie Free Library	Alice C. Graham	9,250
Paola	Free Public Library	Issie B. Pitts	10,676
Parsons	Public Library	Mrs. Belle Curry	10,700
Peabody	do	Emma F. Christ	12,000
Pittsburg	do	Mrs. Theresa G. Randolph	16,500
Salina	Free Public Library	Mrs. Delia E. Brown	18,560
Topeka	do	Caroline Medlicott	34,027
Do	State Library	James L. King	85,202
Washington	Public Library	Stella H. Johnson	2,500
Wichita	City Library	Julius Lucht	15,246
KENTUCKY.			
Covington	Public Library	Anne M. Spears	21,427
Danville	Danville Library	Louise Cooke	4,000
Frankfort	State Library	Frank K. Kavanaugh	116,626
Harrodsburg	Public Library	Mrs. Fred. G. Currey	5,200
Henderson	do	Susan S. Towles	9,520
Hickman	Carnegie Library	J. M. Calvin	5,000
Knottsville	Free Library	Teresa Carries	3,000
Lawrenceburg	Carnegie Library	Miss Russell Chambers	3,799
Lexington	Public Library	Florence Dillard	32,191
Louisville	Free Public Library	George T. Settle	216,114

XX.—Librarians of Public and Society Libraries—Continued.

ocation.	Name of library.	Librarian.	Number bound volumes.
Y—continued.			
	Public Library	Mary E. Richeson	9,000
rling	Atheneum Library	Mrs. Jennie M. Samuels	4,000
	Public Library	Henrietta J. Litzendorff	13,112
ille	Withers Memorial Library	Lyde Hughes	4,324
o	Carnegie Free Public Library	Susannah Bishop	8,775
	Carnegie Public Library	Jessica Hopkins	20,700
	Public Library	Imogen Redmon	7,220
	Free Library	Mrs. Arthur W. Lloyd	5,678
	Public Library	Mrs. Wynona McDaniels	6,300
	Logan-Helm Memorial Library	Miss M. W. Edwards	2,224
UISIANA.			
a	Public Library	Lillie J. Thornton	4,211
uge	do	Sarah Stirling	5,000
	Carnegie Library	Mrs. Minna L. Roberts	3,200
les	Carnegie Public Library	Mrs. C. M. Dees	5,000
ans	Howard Memorial Library	William Beer	58,000
	Public Library	Henry M. Gill	161,309
	State Library	Alice M. Magee	40,000
MAINE.			
	Parsons Memorial Library	Mary C. Emerson	7,715
	Public Library	Mabel E. French	6,997
	do	Georgiana Lunt	21,535
	Lithgow Library and Reading Room.	Julia M. Clapp	13,000
	State Library	Henry E. Dunnack	120,000
	Public Library	Charles A. Flagg	57,569
or	Jesup Memorial Library	I. M. Suminsbey	12,500
	Patten Free Library	Margaret Rogers Foote	22,212
	Free Library	Annie Leonora Barr	18,452
	Public Library	Emma Hatch	18,000
k	Curtis Memorial Library	Mary G. Gilman	16,000
	Free Library and Reading Room	Alice L. Delaney	11,700
	Public Library	Mrs. Emma J. Hosmer	7,956
	Witherle Memorial Library	Katherine Davenport	5,500
d	Public Library	Ida E. Wakefield	1,500
	Stewart Free Library	Mrs. Edna A. Hutchins	7,000
nd Mills	Cumberland Mills Library	Lucy S. Anderson	7,250
	Town Library	Lizzie S. Springall	13,181
	Thompson Free Library	Mary E. Averill	11,952
	Peavey Library	Virginia P. Kemp	12,000
	William Fogg Library	M. Louise Foye	8,270
	City Library	Mary A. Hodgkins	7,018
	Lawrence Public Library	Mrs. Anna R. Reed	8,600
on	Cutler Memorial Library	Mrs. Flora A. Brooks	15,000
	B. H. Bartol Library	Annette H. Aldrich	4,900
	Public Library	Mrs. B. C. Berry	15,000
	Baxter Memorial Library	Victoria A. Magnusson	10,050
	Memorial Library	Ernestine Hale	5,500
	Hubbard Free Library	Annie F. Page	12,500
	Cary Memorial Library	Anna Barnes	12,000
ak	Public Library	Mrs. C. R. Bragdon	11,000
	Rice Public Library	Eleanor L. Lovell	11,475
	Public Library	Angie E. Tracy	26,340
Soldiers' Home	National Soldiers' Home Library	Frank L. Dow	13,128
cester	Public Library	Helen A. Moseley	7,000
	do	Helen H. Holmes	9,000
l	do	Amy S. Wood	7,000
nd	Orr's Island Library	Abbie F. Stevens	5,500
	Hamlin Memorial Hall	Mrs. C. E. Shaw	2,700
	Public Library	Minnie Porter	7,700
	do	Alice C. Furbish	76,000
sle	Free Library	Lucinda B. Marston	5,800
	Public Library	Mrs. L. J. Kempton	5,980
	do	Nancy I. Burbank	11,952
	Dyer Library Association	John Haley	18,000
	Public Library	Bentley Aveyard	5,000
n	do	Mrs. Fanny J. Cabot	14,256
rwick	Fogg Memorial Library	Elizabeth H. Goodwin	8,334
ris	Paris Public Library	Mrs. Ella A. Wight	5,000
land	Poland Spring Library	Frank Carlos Griffith	7,200
m	Public Library	Lizzie S. Levensaler	7,349
ren	do	Linda A. Jones	5,000
e	do	Jennie M. Smith	13,500
k	Memorial Library	Lillian Quinby	16,000
	Free Public Library	Lucy E. Palmer	4,760
ville	Merrill Memorial Library	Ellen S. Mitchell	8,800

XXX.—Librarians of Public and Society Libraries—Continued.

Location.	Name of library.	Librarian.	Nu b vo
MARYLAND.			
Annapolis	State Library	Nettie V. Mace	
Baltimore	City Library	Wilbur F. Coyle	
Do	Enoch Pratt Free Library	Bernard C. Steiner	
Frederick	Frederick County Free Library	Eleanor R. Elder	
Hagerstown	Washington County Free Library	Mary L. Titcomb	
Kensington	Noyes Library	Mrs. Orin J. Field	
Reisterstown	Tillard Memorial Free Library	Aileen McKenney	
MASSACHUSETTS.			
Abington	Public Library	A. Brewster Vaughn	
Acton	Memorial Library	Arthur F. Davis	
Adams	Free Library	Mabel L. Moore	
Amesbury	Public Library	Alice C. Follansbee	
Amherst	do	Inez Chapman	
Andover	Memorial Hall Library	Edna A. Brown	
Arlington	Robbins Library	Elizabeth J. Newton	
Ashburnham	Stevens' Public Library	Mrs. N. T. Wheeler	
Ashfield	Belding Memorial Library	May G. Boice	
Ashland	Public Library	Mrs. Ellen M. Arnold	
Athol	do	Edith Barber	
Attleboro	do	Mrs. Lucinda F. Spofford	
Ayer	Ayer Library	S. Adelaide Blood	
Barnstable	Sturgis Library	Elizabeth C. Nye	
Barre	Town Library	Carrie E. Read	
Bedford	Free Public Library	Fannie Wood	
Belchertown	Clapp Memorial Library	Mrs. Cora S. Burnett	
Belmont	Public Library	Lucy D. Luard	
Bernardston	Cushman Library	Nellie M. G. Pierce	
Beverly	Public Library	Martha P. Smith	
Billerica	Bennett Public Library Association.	Emma M. Whitford	
Blackstone	Free Public Library	P. F. Fitzgerald	
Bolton	Public Library	Fidelia C. Newton	
Boston	Boston Athenæum Library	Charles Knowles Bolton	2
Do	State Library	Lawrence B. Evans	1
Do	Public Library	Charles F. D. Belden	1,1
Bourne	Jonathan Bourne Public Library.	Jane Storms	
Braintree	Thayer Public Library	Lucretia F. Hatch	
Brewster	Ladies Library	Alma Rogers	
Bridgewater	Public Library	Lucia L. Christian	
Brimfield	do	Mary Anna Tarbell	
Brockton	do	Frank H. Whitmore	
Brookfield	Merrick Public Library	Harriet G. Brown	
Brookline	Public Library	Louisa M. Hooper	
Bryantville	Cobb Library	Mrs. Julia Morton	
Cambridge	Public Library	T. Harrison Cummings	1
Canton	do	Mrs. Lucy D. Downes	
Charlemont	Free Town Library	Alice Bemis	
Charlton	Free Public Library	Ruth P. Wakefield	
Chatham	Eldredge Public Library	Edna M. Hardy	
Chelmsford	Adams Library	Mrs. E. R. Clark	
Chelsea	Public Library	Medora J. Simpson	
Cheshire	Library Association	Emma E. Martin	
Chicopee	Public Library	Anne A. Smith	
Clinton	Bigelow Free Public Library	Helen A. Thissell	
Cohasset	Paul Pratt Memorial Library	Sarah B. Collier	
Concord	Free Public Library	Helen W. Kelley	
Conway	Field Memorial Library	Cora M. Hassell	
Cotuit	Public Library	Beulah B. Borden	
Cummington	Bryant Free Library	Mrs. Lottie W. Tower	
Dalton	Free Public Library	Mrs. Caroline R. Flickinger	
Danvers	Peabody Institute Library	Mrs. Emilie D. Patch	
Dedham	Public Library	Anna P. Rolland	
Dover	Town Library	Elizabeth F. Heard	
Dudley	Conant Library	Leora E. Dugar	
Duxbury	Free Library	Sara B. Higgins	
East Bridgewater	Public Library	Lucy L. Siddall	
East Douglas	Simon Fairfield Public Library	Rosalie E. Williams	
East Northfield	Talcott Library	Virginia T. Smith	
Easthampton	Public Library	Hazel M. Benjamin	
Essex	T. O. H. P. Burnham Public Library.	Ethelyn B. Story	
Everett	Frederick E. Parlin Memorial Library.	Ellen L. Johnson	
Do	Shute Memorial Library	Pearl L. Purinton	
Fairhaven	Milicent Library	Galen W. Hill	

XXX.—Librarians of Public and Society Libraries—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
CHUSETTS—contd.			
iver	Public Library	George W. Rankin	103,418
uth	Free Public Library	Pamella F. Robbins	12,085
urg	Public Library	George E. Nutting	60,781
ce	Lilly Library	Mrs. S. Minerva Paxton	6,000
ngham	Town Library	Emma L. Clarke	39,100
lin	Franklin Library	Mrs. Ella G. Campbell	10,400
er	Levi Heywood Memorial Library	Lilian Callahan	16,614
town	Peabody Library	Lois P. Noyes	8,892
ster	Sawyer Free Library	Rachel S. Webber	22,000
n	Public Library	Lucy W. Biscoe	14,616
Barrington	Mason Library	Emma W. Sheldon	16,938
ield	Public Library	May Ashley	35,350
	.....do	Emma F. Blood	14,246
and	.....do	Helena M. Nickerson	5,692
	Goodwin Memorial Library	George C. Marsh	6,000
ton	Public Library	Annie S. Preston	5,000
er Center	John Curtis Free Library	Bessie M. Sproul	8,000
rd	Public Library	Mrs. James L. Whitney	8,229
ld	Free Public Library	Ellen A. Waite	5,792
hill	Public Library	John G. Moulton	110,000
am	.....do	Albert L. Stephenson	16,000
le	.....do	Mrs. Cora Lovell	10,000
ook	.....do	Zenas A. French	10,000
n	Gale Free Library	M. Addie Holden	7,575
on	Public Library	Frances J. Hayes	2,000
ke	.....do	Frank G. Willcox	53,560
ale	Bancroft Memorial Library	Harriet B. Sornborger	13,372
tonic	Ramsdell Public Library	Lydia A. Fuller	9,000
rdston	Free Public Library	Mrs. Lucy H. Clough	5,726
n	Public Library	Grace M. Whittemore	12,248
h	Free Public Library	Mary B. Maine	12,817
on	Frederic C. Adams Public Library.	Mrs. Jennie F. McLauthlen	9,865
ster	Town Library	Virginia M. Keyes	41,128
oro	Newton Memorial Library	Mrs. E. G. Loring	2,000
nce	Free Public Library	William A. Walsh	72,766
	Library Association	Mary Stallman	10,500
ter	Public Library	Mary D. Thurston	16,000
	Lenox Library	Edith O. Fitch	19,500
nster	Public Library	Florence E. Wheeler	34,444
ton	Cary Memorial Library	Marian P. Kirkland	30,064
n	Public Library	Lydia J. Chapin	10,684
on	Reuben Hoar Library	Margaret E. Thacher	14,012
	City Library	Frederick A. Chase	102,000
burg	Ritter Memorial Library	L. Frances Jones	9,181
	Public Library	Clarence E. Sherman	108,053
lia	Magnolia Library	Mrs. C. C. Sargent	7,400
n	Public Library	Herbert W. Fison	71,879
ester	.....do	Jennie C. Sargent	12,000
eld	.....do	Ida F. Hodges	8,500
head	Abbott Public Library	Mrs. Sarah E. Gregory	22,000
n	Library Association	Alice A. Ryder	9,106
ro	Public Library	John P. McGee	39,000
oisett	Free Public Library	Grace A. Tilden	7,375
rd	Public Library	Mrs. Sarah F. Nyman	5,500
ld	.....do	Lucretia M. Johnson	4,500
rd	.....do	Abby L. Sargent	53,732
e	.....do	Carrie M. Worthen	21,000
n	Taft Public Library	Mrs. Lena W. George	5,900
nac	Public Library	Susanna I. Sayre	6,000
en	Nevins Memorial Library	Harriet L. Crosby	22,500
boro	Public Library	Mary M. Eddy	22,474
ton	Flint Public Library	Edith L. Fletcher	8,131
l	Town Library	Nathaniel F. Blake	20,909
ry	Sutton Free Library	Mrs. Florence Freeland	5,000
	Public Library	Gertrude E. Forrest	29,737
n	Horatio Lyon Memorial Library	Maud C. Sweet	13,873
gue	Town Library	Kate A. Armstrong	7,983
Hermon	Schauffler Memorial Library	Anna L. Miller	14,950
t	Public Library	May W. Perkins	25,204
cket	Nantucket Atheneum	Clara Parker	20,000
	Morse Institute	Mira R. Partridge	29,000
am	Free Public Library	Esther C. Johnson	20,000
edford	.....do	George H. Tripp	163,053
ryport	Public Library	John D. Parsons	54,440
n	Free Library	Harold T. Dougherty	100,182
Abington	Public Library	Gertrude M. Gleason	10,000
Adams	.....do	Mabel Temple	38,854

XXX.—LIBRARIANS OF PUBLIC AND SOCIETY LIBRARIES—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
MASSACHUSETTS—contd.			
North Andover	Stevens Memorial Library	Elizabeth M. Pond	15,000
North Attleboro	Richards Memorial Library	Ada M. Perry	15,000
North Brookfield	Appleton Library	William S. Gooch	5,000
Do	Free Public Library	Katharine E. Smith	8,000
North Chelmsford	Public Library	Anna C. MacKay	7,699
North Easton	Ames Free Library	Mary L. Lamprey	20,873
North Reading	Flint Memorial Library	Addie W. Gowing	6,260
Northampton	Forbes Library	J. L. Harrison	147,009
Northboro	Free Library	M. Evelyn Potter	15,600
Northfield	Dickinson Memorial Library	Mrs. Nellie G. Randall	10,814
Norton	Public Library	Mabel E. Roode	8,443
Norwell	James Library	Marion G. Merritt	5,000
Norwood	Morrill Memorial Library	Jane A. Hewitt	21,160
Orange	Wheeler Memorial Library	N. Gertrude Hendrickson	15,800
Orleans	Snow Library	Mary S. Cummings	6,472
Oxford	Free Public Library	Mrs. Clara A. Fuller	11,000
Palmer	Young Men's Library	Clifton A. Hobson	12,000
Peabody	Peabody Institute Library	John E. Keefe	48,201
Pepperell	Lawrence Memorial Library	Helen M. Wiley	18,825
Petersham	Memorial Library	Fannie G. Prince	8,000
Phillipston	Phillips Free Public Library	Mrs. Cora A. Dunton	6,850
Pittsfield	Berkshire Athenæum and Museum.	Harlan H. Ballard	60,000
Plymouth	Public Library	Lilian C. Kerr	15,000
Princeton	do	Susan A. Davis	8,500
Provincetown	do	Abbie C. Putnam	14,000
Quincy	Thomas Crane Public Library	Alice G. White	44,512
Randolph	Turner Free Library	Alice M. Belcher	26,953
Reading	Public Library	Bertha L. Brown	9,434
Revere	do	Harriet T. Fenno	11,000
Rockland	Memorial Library	Mrs. Lida A. Clark	16,000
Rockport	Public Library	Mabel L. Woodfall	5,084
Royalston	Phinehas S. Newton Library	Mrs. Emeline E. Mackenzie	4,318
Salem	Public Library	Gardner M. Jones	66,000
Do	Salem Athenæum	Mrs. Alice H. Stone	28,064
Sandwich	Weston Memorial Library	Annie A. Rogers	6,000
Saugus	Free Public Library	Mrs. Edith F. Nickerson	13,000
Sharon	Public Library	Isadora B. Paine	8,000
Shelburne Falls	Arms Library	Mrs. S. A. Field	11,000
Sherborn	Dowse Library	Elizabeth D. Coolidge	8,000
Shirley	Public Library	Grace M. Kilburn	6,600
Shrewsbury	Free Public Library	Mabel E. Knowlton	11,982
Somerset	do	Frances M. Rogers	4,000
Somerville	Public Library	George H. Evans	113,221
South Braintree	Thayer Public Library	Lucretia F. Hatch	17,282
South Dartmouth	Southworth Library	Theodosia P. Chase	8,500
South Hadley	Gaylord Memorial Library	Rebecca F. Smith	7,055
South Natick	Bacon Free Library	Mrs. Adelaide Williams	4,982
South Sudbury	Goodnow Library	Mrs. Warren Hunt	10,400
South Weymouth	Fogg Library	Ruth N. Tower	8,795
Southboro	Fay Library	Sarah V. Stivers	13,976
Southbridge	Jacob Edwards Library	Ella E. Miersch	22,636
Spencer	Richard Sugden Library	Clarence R. Hodgdon	14,500
Springfield	City Library Association	Hiller C. Wellman	240,000
Springfield(Longmeadow)	Richard Salter Storrs Library	Mrs. Lucy A. Booth	7,122
Sterling	Conant Free Public Library	Pearl L. Heywood	9,625
Stockbridge	Library Association	Agnes J. Goodwin	11,000
Stoneham	Public Library	Margaret O. Wood	12,084
Stoughton	do	Amelia Clifton	15,000
Stow	Randall Memorial Library	Mrs. S. M. Lawrence	6,000
Sturbridge	Joshua Hyde Public Library	Susan L. Haynes	9.806
Sunderland	Sunderland Library	Daisy B. Montague	6,050
Swampscott	Public Library	Sarah L. Honors	12,208
Swansea	Free Public Library	Otis O. Wright	7,924
Taunton	Public Library	Joshua E. Crane	67,378
Templeton	Boynton Public Library	Grace E. Blodgett	10,500
Tewksbury	Public Library	Abbie M. Blaisdell	6,200
Topsfield	Town Library	Annie P. Gleason	12,380
Townsend	Public Library	Mrs. Evelyn L. Warren	6,945
Turners Falls	Carnegie Public Library	Louise S. Partenhemer	9,000
Tyngsboro	Littlefield Library	Jennie J. Bancroft	8,093
Upton	Town Library	Helen A. Fay	7,370
Uxbridge	Free Public Library	Beatrice P. Sprague	12,000
Vineyard Haven	do	Bessie H. Stanton, acting	6,000
Wakefield	Beebe Town Library	H. Gertrude Lee	19,093
Walpole	Public Library	Margaret B. Forster	15,399
Waltham	do	Orlando C. Davis	45,189

XXX.—Librarians of Public and Society Libraries—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
MASSACHUSETTS—contd.			
Ware	Young Men's Library Association.	Mary L. Smith	11,487
Warren	Public Library	Joseph G. Hastings	12,487
Warwick	Free Public Library	Mrs. Alice B. Hastings	6,260
Watertown	do	Lydia W. Masters	48,271
Wayland	do	Margaret E. Wheeler	15,295
Webster	do	Mrs. Phoebe P. Kingsbury	13,509
Wellesley	Free Library	Elizabeth H. Camp	20,090
Wenham	Public Library	Benjamin H. Conant	6,000
West Boylston	Beaman Memorial Public Library.	Annie M. Waite	10,000
West Bridgewater	Public Library	Mrs. Hattie E. Cary	7,876
West Brookfield	Merriam Public Library	Helen P. Shackley	7,200
West Newbury	Public Library	Sarah O. Bailey	5,887
West Springfield	do	Marion Bowler	11,000
Westboro	do	Flora B. Brigham	18,811
Westfield	Westfield Atheneum	George L. Lewis	37,000
Westford	J. V. Fletcher Library	Mary P. Bunce	16,488
Westhampton	Reunion Library	Gilbert I. Flint	5,530
Westminster	Forbush Memorial Library	Sadie F. Greene	8,000
Weston	Public Library	Maude M. Pennock	23,520
Weymouth	Tufts Library	Abbie L. Loud	30,608
Whitinsville	Social Library	Mary R. Clarke	13,225
Whitman	Public Library	Ellena S. Spilsted	14,000
Williamsburg	Meekins Memorial Library	Jennie L. Baker	8,750
Williamstown	Public Library	Lucy F. Curtis	8,300
Winchendon	Beals Memorial Library	Georgia Farnum	12,005
Winchester	Public Library	Cora A. Quimby	22,973
Winthrop	do	Sabina M. Nelson	13,787
Woburn	do	Ethel A. Wallace, acting	50,010
Worcester	Free Public Library	Robert K. Shaw	244,047
Do	Webster Free Public Library	Phoebe P. Kingsbury	11,255
Wrentham	Fiske Public Library	Mary A. Smith	6,464
Yarmouthport	Yarmouth Library Association	Mrs. Lydia C. Matthews	9,700
MICHIGAN.			
Adrian	Public Library	Margaret F. Jewell	25,275
Albion	do	Elizabeth Farnham	6,325
Allegan	do	Lenora E. Porter	7,500
Alpena	do	Emily E. Oliver	6,500
Ann Arbor	do	Nellie S. Loving	24,150
Bay City	do	Agnes Van Valkenburgh	43,004
Do	Sage Library	Molly M. Gilbert	38,300
Benton Harbor	Public Library	Theodosia Falkingham	10,400
Big Rapids	Phelps Free Library	Mary Morrissey, acting	9,920
Cadillac	Public Library	William F. Sanborn	16,807
Charlotte	Free Public Library	Emily B. Robb	9,937
Cheboygan	Carnegie Free Library	Amy M. Bell	7,818
Coldwater	Free Public Library	Florence M. Holmes	1,982
Detroit	Public Library	Adam Strohm	482,865
Dowagiac	do	Grace ReShore	10,350
Escanaba	Carnegie Public Library	Lura E. Brubaker	10,843
Fenton	A. J. Phillips Public Library	Ella M. Williams	10,640
Flint	Public Library	Lena F. Caldwell	20,495
Grand Rapids	do	Samuel H. Ranck	185,228
Greenville	School and Public Library	Alice Fuller	5,800
Harbor Springs	Christian Association Library	Mrs. Bertha Fuller	5,515
Hillsdale	Mitchell Public Library	Mary Pratt	13,296
Holland	Public Library	Jennie R. Kanters	11,295
Houghton	do	Harriet L. Allen	13,500
Howell	Carnegie Library	E. Gladys Cook	10,162
Hudson	Public Library	Mamie E. Havens	9,645
Ionia	Hall-Fowler Memorial Library	Nina K. Preston	8,295
Iron Mountain	Carnegie Public Library	Leonore C. Carpenter	15,520
Ironwood	Carnegie Library	Emily Chisholm	10,000
Ishpeming	Carnegie Public Library	Mrs. Nellie E. Brayton	25,000
Jackson	Public Library	John S. Cleavinger	50,000
Kalamazoo	do	Flora B. Roberts	50,000
Lansing	Public School Library	Mrs. E. Jennie McNeal	28,159
Do	State Library	Mary C. Spencer	200,000
Lowell	Public Library	Hazel E. Maynard	7,260
Ludington	do	Alice L. Wing	9,500
Manistee	City and School Library	Angie Messer	19,500
Marquette	Peter White Public Library	Alma A. Olson	26,423
Mendon	Public Library	N. E. Strickland	6,158
Menominee	Spies Public Library	Cordelia Pleister	13,246

XXX.—Librarians of Public and Society Libraries—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
MICHIGAN—contd.			
Monroe	Dorsch Memorial Library	Mrs. Jennie S. Wallace	9,824
Mount Clements	Public Library	Agnes L. Snover	13,002
Muskegon	Hackley Public Library	Lulu F. Miller	58,000
Niles	Public Library	Orrill P. Coolidge	9,302
Painesdale	Sarah Sargent Paine Memorial Library.	Amelia T. Pickett	9,738
Petoskey	Public Library	Amy Lusk	7,000
Pontiac	Ladies' Library	Agnes P. Pudworth	6,000
Port Huron	Ladies' Library Association	Cora M. Carson	5,000
Do	Public Library	Katharyne Sleneau	28,000
Portland	do	Edna J. Bandfield	3,600
Quincy	Free Public Library	Maud S. Barnes	4,508
Royal Oak	Township Library	Elizabeth V. Briggs	3,350
Saginaw	Butman Fish Memorial Library	Anna Benjamin	17,484
Do	East Side Public Library	Mary E. Dow	20,647
Do	Hoyt Library	Harriet H. Ames	36,000
St. Joseph	Public Library	M. Bernice Tuscott	8,200
Sault Ste. Marie	Carnegie Public Library	Adah Shelly	12,909
Sturgis	Carnegie Free Public Library	Alida Patterson	7,129
Tecumseh	Public Library	Elizabeth Widney	6,775
Three Rivers	Free Public Library	Sue I. Silliman	15,000
Traverse City	Public Library	Alice M. Wait	17,462
Ypsilanti	Ladies' Library	Mrs. Lucy B. Loomis	11,707
MINNESOTA.			
Albert Lea	Public Library	Henrvetta Armstrong	7,100
Alexandria	Free Public Library	Mrs. Margaret A. McCord	9,090
Anoka	Public Library	Mrs. Georgia A. Gess	6,422
Austin	Carnegie Public Library	Tayne Burgess	8,000
Chisholm	Public Library	Margaret Palmer	9,000
Cloquet	do	Mildred E. Elley	6,691
Crookston	Carnegie Public Library	Elizabeth Lommen	5,008
Crosby	Public Library	Mrs. William C. Deering	1,800
Duluth	do	Frances E. Earhart	72,308
Fairmont	do	Minnie Bird	5,907
Faribault	do	Sarah E. Le Crone	14,500
Fergus Falls	do	Amy A. Lewis	7,550
Hastings	Public and School Library	Stella Telford	5,575
Hibbing	Public Library	Dorothy Hurlbert	22,698
Keewatin	do	Helen Young Prall	3,697
Little Falls	Carnegie City Library	Mrs. Jenny Lind Blanchard	6,255
Luverne	Public Library	Mrs. D. E. Halbert	4,346
Mankato	do	Maud van Buren, acting	26,000
Minneapolis	do	Gratia A. Countryman	334,763
Montevideo	do	Edith M. Crandall	8,729
Moorhead	do	Ethel S. McCubrey	8,102
Morris	do	Agnes Torpey	5,960
Mountain Iron	Carnegie Public Library	Stella Stebbins	5,132
Northfield	Public Library	Mary L. Southworth	7,040
Owatonna	Free Public Library	Carol L. Clarkson	18,824
Pipestone	Public Library	May C. Funk	7,050
Red Wing	Carnegie-Lawther Library	Grace L. Meyer	9,733
Rochester	Public Library	Edna Emerick	15,000
St. Cloud	do	Mrs. Marie E. Brick	15,028
St. Paul	do	W. Dawson Johnston	161,609
Do	State Library	Elias J. Lien	84,450
Sauk Center	Bryant Library	Eva M. Davis	9,508
Stillwater	Public Library	Mary E. Corson	14,785
Two Harbors	do	Vivadale Schultz	5,509
Virginia	do	Grace M. Stevens	20,000
Willmar	do	Amy Hanscom	4,382
Winona	Free Public Library	Jeannette A. Clark	36,891
MISSISSIPPI.			
Biloxi	King's Daughters Library	M. T. Rodenberg	3,509
Clarksdale	Carnegie Public Library	Miss Hoyland L. Wilson	4,300
Greenville	Public Library	Amanda Worthington	10,000
Jackson	State Library	Mrs. W. F. Marshall	100,000
Meridian	Public Library	Mrs. A. K. Hamm	7,000
Natchez	Fisk Memorial Library	M. B. Montgomery	3,000
Vicksburg	Public Library	Mrs. Celestine W. Forster	4,020
West Point	Carnegie Library	Lucy Heard	2,500
Yazoo City	Library Association	Mrs. F. Barksdale	7,000

XXX.—Librarians of Public and Society Libraries—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
MISSOURI.			
Albany	Carnegie Public Library	May Erskine	4,456
Bonne Terre	Memorial Library	Frances Stevens	3,858
Carthage	Public Library	Alice R. Gladden	10,949
Hannibal	Free Public Library	Nancy C. McLachlan	14,087
Independence	....do	Carrie Wallace	16,000
Jefferson City	....do	Julia Andrae	8,205
Do	State Library	A. J. Mentoer	63,688
Joplin	Free Public Library	Mary B. Swanwick	29,895
Kansas City	Public Library	Purd B. Wright	235,000
Louisiana	....do	Elizabeth Irwin	6,041
Maryville	Free Public Library	Mary Grace Langan	7,655
Moberly	....do	Mrs. Bessie S. Lee	9,000
Nevada	....do	Mary E. Barr	3,000
St. Joseph	Public Library	Jesse Cunningham	85,000
St. Louis	....do	Arthur E. Bostwick	501,319
Sedalia	....do	Irene E. Blair	19,943
Springfield	....do	Harriet M. Horine	15,410
Trenton	Jewett Norris Library	Mrs. Maud Crecelius	6,000
MONTANA.			
Anaconda	Hearst Free Library	Elizabeth L. Thomson	15,640
Big Timber	Carnegie Library	Caroline Carnes	3,009
Billings	Parmly Billings Memorial Library.	Mrs. Henry E. Garber, jr	18,000
Bozeman	Free Library	Geneva Cook	12,660
Butte	Free Public Library	Gertrude Nichols	48,737
Deer Lodge	William K. Kohrs Memorial Library.	Grace Reely	6,500
Dillon	Public Library	Mary L. Innes	8,778
Fort Benton	Chouteau County Free Library	Pauline Madden	8,000
Great Falls	Public Library	Louise M. Fernald	23,067
Hardin	Big Horn County Library	W. E. Fearis	1,850
Havre	Carnegie Public Library	Mrs. Mary F. Homan	4,345
Helena	Public Library	Josephine M. Haley	55,000
Do	State Law Library	Ashburn K. Barbour	32,000
Kalispell	Public Library	Elizabeth P. Ritchie	7,225
Lewiston	Carnegie Public Library	Clara M. Main	6,550
Livingston	....do	Ruth V. Steadman	7,200
Malta	Phillips County Library	Mrs. Mae White, acting	2,620
Miles City	Carnegie Library	Mrs. Laura Zook	7,000
Missoula	County Free Library	Elizabeth B. Howell	21,000
Red Lodge	Public Library	Mrs. M. A. Smith	3,000
NEBRASKA.			
Aurora	Public Library	Lillian Moore	5,466
Beatrice	Free Public Library	Merlyn Abbott	11,980
Columbus	Public Library	Rosemary Riddell	5,660
David City	....do	Lillian M. Simpkins	6,500
Falls City	Lydia Bruun Wood Library	Mary Hutchings	9,427
Fremont	Public Library	Sara E. Gosselink	10,000
Grand Island	....do	Daisy Houck	6,967
Hastings	Carnegie Library	Mrs. Ida E. Capps	9,051
Kearney	Public Library	Mrs. Pauline Frank	19,000
Lincoln	City Library	Lulu Horne	44,399
Do	State Library	H. C. Lindsay	75,626
McCook	Public Library	Grace Willetts	5,704
Nebraska City	....do	Anne Stevenson	7,000
Omaha	....do	Edith Tobitt	135,000
Plattsmouth	....do	C. Olive Jones	7,345
York	....do	Ada O. Haggard	8,876
NEVADA.			
Carson City	State Library	Frank J. Pyne	81,186
Reno	Free Public Library	E. N. Damon	19,000
Tonopah	Public Library	Mrs. Grace R. Moore	3,500
NEW HAMPSHIRE.			
Alton	Public Library	Annie A. Wheeler	4,000
Amherst	Town Library	Mrs. Alice M. Wyman	6,036
Antrim	James A. Tuttle Library	Mrs. J. E. Perkins, acting	7,000
Berlin	Free Public Library	Lottie C. Kalley, acting	9,882
Bristol	Minot-Sleeper Library	Mrs. Mary A. Dodge	8,436
Charlestown	Silsby Free Public Library	Anna L. Webber	8,000

XXX.—LIBRARIANS OF PUBLIC AND SOCIETY LIBRARIES—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
NEW HAMPSHIRE—contd.			
Claremont	Fiske Free Library	Mrs. Mary S. Ide	11,000
Colebrook	Public Library	Sarah E. Rolfe	5,000
Concord	....do	Grace Blanchard	30,000
Do	State Library	Arthur H. Chase	166,000
Dover	Public Library	Caroline H. Garland	47,000
Dublin	....do	Minnie E. Leffingwell	6,000
East Derry	Taylor Library	C. Louise Bachelder	7,741
East Jaffrey	Jaffrey Public Library	Lucia B. Cutter	7,300
Exeter	Public Library	Carrie W. Byington	20,362
Fitzwilliam	Town Library	Annie L. Colby	8,000
Franconia	Abbie Greenleaf Library	Eva M. Aldrich	5,171
Franklin	Public Library	Mrs. Barron Shirley	11,418
Greenland	Weeks Library	Lillian A. Odell	6,390
Hancock	Town Library	Annie L. Putnam	7,047
Hanover	Howe Library	Etta M. Clark	8,308
Henniker	Tucker Free Library	Mrs. M. Marion Cole	7,000
Hinsdale	Public Library	Charlotte S. Slate	10,500
Hollis	Social Library	M. Louise Stratton	5,647
Hudson	Hills Memorial Library	Mrs. Eliza B. Leslie	6,440
Keene	Public Library	Mary L. Saxton	21,253
Kingston	Nichols Memorial Library	Mrs. Nellie F. Ingalls	6,621
Laconia	Public Library	Olin S. Davis	24,000
Lancaster	....do	Martha W. Brackett	12,000
Lebanon	....do	Emma Morris	7,974
Lisbon	....do	Nettie L. Kelsea	5,242
Littleton	....do	Jennie E. Smith	12,000
Manchester	City Library	F. Mabel Winchell	85,000
Marlboro	Frost Free Library	Mabelle F. Derby	7,000
Meredith	Public Library	Mrs. Lillian Wadleigh	6,000
Milford	Free Library	Annabell C. Secombe	13,204
Nashua	Public Library	Sarah P. Barker	38,954
New Hampton	Gordon-Nash Library	Ina A. Bickford	16,272
New Ipswich	New Ipswich Library	Frances L. Nash	7,139
Newmarket	Public Library	Mrs. Charles H. Mathes	6,230
Newport	Richards Free Library	Mrs. Charles Miller	10,474
Peterboro	Town Library	Ruby Tillinghast	18,000
Portsmouth	Public Library	Hannah G. Fernald	23,200
Rochester	....do	Lillian E. Parshley	20,097
Tilton	Hall Memorial Library	Mary M. Emery	8,525
Wakefield	Public Library	Alice C. Milliken	7,508
Walpole	Town Library	Frances M. Sabin	11,000
Warner	Pillsbury Free Library	Mary B. Harris	12,000
Whitefield	Public Library	Alice E. Dodge	7,170
Wilton	Gregg Free Library	Bessie F. Bales	10,070
Wolfeboro	Brewster Free Library	Elizabeth Brewster	6,500
Woodsville	Free Public Library	Mrs. N. J. Chamberlin	6,000
NEW JERSEY.			
Asbury Park	Public Library	Josephine W. Porter	16,060
Atlantic City	....do	Alvaretta P. Abbott	38,000
Bayonne	Free Public Library	Mary G. Peters	62,000
Belleville	Public Library	Mrs. E. A. Shattuck	17,132
Bernardsville	Bernards Library Association	Katharine D. Hinman	7,400
Bloomfield	Jarvie Memorial Library	Mrs. Metta R. Ludey	19,342
Bridgeton	Bridgeton Library	Emma V. Wallen	10,000
Burlington	Burlington Library	Lydia Weston	20,505
Camden	Free Public Library	William H. Ketler	65,000
Cranford	....do	May D. Bradley	7,500
Dover	....do	Martha A. Burnet	8,000
East Newark	East Newark Library	Thomas J. Carey	10,454
East Orange	Free Public Library	Louise G. Hinsdale	55,721
Edgewater	Free Library	Clara M. Beckley	5,526
Elizabeth	Free Public Library	C. A. George	54,748
Englewood	....do	Irene A. Hackett	17,482
Gladstone	Gladstone and Peapack Public Library.	J. H. Wood	2,000
Glen Ridge	Free Public Library	Margaret D. Brower	10,742
Hackensack	Johnson Public Library	Mary Boggan	22,465
Haddonfield	Free Public Library	Anna L. Cawley	8,000
Hoboken	....do	Thomas F. Hatfield	75,750
Jersey City	....do	Edmund W. Miller	187,374
Kearny	....do	M. Belle KilGour	12,568
Lakewood	Public Library	Katharine L. Hinsdale	7,400
Long Branch	....do	Mary Clarkson	5,000
Millville	....do	Madeline Powell	4,000
Montclair	Free Public Library	Alta M. Barker	42,820
Morristown	Morristown Library and Lyceum	Mary P. Parsons	15,000

XXX.—Librarians of Public and Society Libraries—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
RSEY—continued.			
k	Library Association	Adelaide H. Wright	2,400
unswick	Free Public Library	Mary N. Walker	37,412
	Gardner A. Sage Library	John C. Van Dyke	53,000
	Free Public Library	John C. Dana	260,000
	Dennis Library	A. Elizabeth Case	8,075
	Free Public Library	Irene Calvert Phillips	6,053
	Free Library	Elizabeth H. Wesson	42,976
	Public Library	Edna B. Pratt	41,893
n	Free Public Library	George F. Winchester	74,457
mboy	Public Library	Alice Goddard	23,000
ld	Public Library and Reading Room.	Florence M. Bowman	58,545
on	Free Public Library	Agnes Miller	10,000
y	Library Association	Adele W. Lupton	19,400
n	Free Library	Elizabeth B. Campbell	6,000
ay	Free Public Library	Etta Davey	3,100
ford	do	Dorothy E. Burrows	9,370
	Salem Library	Cornelia Prior	14,141
ille	Free Public Library	Elizabeth Carter	7,835
range	Free Public Library	Julia Schneider	10,640
t	do	Emilie Hill	14,600
	Mount Tabor Free Library	Charlotte E. Johns	4,100
	Free Public Library	Howard L. Hughes	82,586
	State Library	John P. Dullard	110,000
d	Free Public Library	Minnie G. Clark	7,500
wken	do	Louise I. Macpherson	18,000
oboken	do	Paul M. Konert	16,909
ld	do	Bessie Smith	9,385
EW MEXICO.			
ardo	Public Library	Mary Darbyshire	2,018
erque	do	Mrs. H. F. Dixon	9,644
d	Norman Crosby Library		2,242
	Public Library	Mrs. Maud C. Hoffman	3,038
s Vegas	Carnegie Public Library	Elisabeth Cooley	7,700
e	Public Library	Nannie Simmons	5,000
NEW YORK.			
n	Public Library	W. E. Barron	5,000
	Free Library	Bertha Cudebec	25,000
	State Library	James I. Wyer, jr	477,506
	Union Free Library	Agnes H. McCarthy	10,000
	Young Men's Association, Central Library.	E. Elizabeth Barker	23,813
	Y. M. A. Pruyn Library	Mabel McKay	14,833
	Swan Library	Lillian A. Achilles	14,000
	Ewell Free Library	Mary E. Patrell	5,800
dam	Free Library	Mrs. Katherine B. Cooley	16,555
a	do	Mrs. Mary G. Horner	8,182
	Seymour Library	Elizabeth Porter Clarke	30,000
	Davenport Library	Mary L. Dodd	9,000
t	Free Library	Ella Sortore	6,044
mton	Public Library	William F. Seward	44,000
lle	Erwin Library	Mrs. Alice F. Owen	6,775
Hampton	Hampton Library	May T. Van Scoy	11,562
ille	Public Library	Mrs. Roger M. Sherman	7,853
n	do	Frank P. Hill	912,065
	Pratt Institute Free Library	Edward F. Stevens	115,000
	Grosvenor Library	Augustus H. Shearer	119,452
	Public Library	Walter L. Brown	363,540
	Historical Society Library	Mrs. Anna A. Andrews	40,000
dge	Public Library	May Carpenter	7,983
	Library Association	Mrs. Mary A. Manzer	6,000
aigua	Wood Library	S. N. Lee	7,980
ta	Public Library	Mrs. Nellie H. Willis	10,019
	Free Library (Benton Memorial)	Fanny E. Wead	8,338
	Public Library	Emily F. Becker	10,000
via	do	Elizabeth B. Needham	15,000
m	Union Free School Library	Margaret E. Meyer	9,746
	Kirkland Town Library	Ruth W. Raymond	6,372
	City Library	Elmer E. Bell	6,700
town	Village Club and Library	Grace E. Cokeley	5,534
	Free Library	E. Pearl Wheeler	12,000
d	Franklin Hatch Library	Margaret H. Force	6,225
cle	Heermance Memorial Library	Esther C. Johnson	7,680
lle	Public Library	Susie M. Parker	7,000
	Free Library	Stanley S. Kilkenny	6,050

XXX.—LIBRARIANS OF PUBLIC AND SOCIETY LIBRARIES—Continued.

Location.	Name of library.	Librarian.	Number bound volumes
NEW YORK—continued			
Dryden	Southworth Library	Jennie Kennedy	11,57[illegible]
Dunkirk	Free Library	Carlina M. Monchow	17,540
East Hampton	do	E. C. Hedges	11,[illegible]
Ellenville	Public Library	Mrs. B. B. Demarest	7,500
Elmira	Steele Memorial Library	Mrs. Kate D. Andrew	24,044
Endicott	Free Library	Margery C. Quigley	5,5[illegible]
Fredonia	Darwin R. Barker Library	Florence S. [illegible]	11,559
Fulton	Public Library	Frances V. Forsyth	8,544
Geneseo	Wadsworth Library	Ethel W. Frazer	21,143
Geneva	Free Library	Margaret A. Hayes	10,023
Glen Cove	Public Library	Eugenie C. Thorne	10,000
Glens Falls	Crandall Free Library	Gertrude Ferguson	12,882
Gloversville	Free Library	Lucy Edel	32,026
Gouverneur	Reading Room Association	Mollie L. Parker	6,290
Greene	Moore Memorial Library	Mary Summers	7,497
Greenport	Greenport Library	Elizabeth Beale	2,900
Greenwich	Free Library	Robert L. Shanks	4,461
Haverstraw	King's Daughters' Public Library.	Mary E. Van Orden	7,680
Herkimer	Free Library	Edith M. Sheaf	13,000
Homer	Phillips Free Library	Mary A. Ferguson	600,200
Hornell	Public Library	Mary E. Windsor	21,087
Hudson	Hendrick Hudson Chapter Free Library.	Maud A. Rice	7,300
Huntington	Library Association	Mary F. Gaines	9,000
Ilion	Free Public Library	Nellie Mae Cheney	17,603
Irvington-on-Hudson	Guiteau Library	Emma Knodel	9,736
Ithaca	Cornell Library Association	Mary E. Mack, assistant	29,226
Jamestown	James Prendergast Free Library	Lucia T. Henderson	26,336
Johnson City	Johnson City Library	Hazel E. Killip	6,800
Johnstown	Public Library	Katherine M. Seaman	15,676
Kingston	City Library	Marion Herbert	10,235
Lawrence	High School Library	Fred De L. Kray	8,640
Little Falls	Public Library	Mabel E. Richards	11,498
Lockport	do	Carrie F. Gates	11,662
Lyons	Civic Club Free Library	Mrs. Ella B. Leonard	5,000
Marathon	Peck Memorial Library	J. W. Livingston	6,500
Middletown	Middletown Library	Mary K. Van Keuren	17,961
Millbrook	Free Library	Myrtle L. Roy	7,575
Moravia	Powers Library	Mrs. Sarah A. C. Butler	9,650
Mount Vernon	Public Library	Frances D. Thomson	38,292
New Rochelle	Public Library	Mary E. Huntington	42,000
New York	do	Edwin H. Anderson	2,001,392
New York (Jamaica P. O.)	Queens Borough Public Library	Jesse F. Hume	252,313
Newark	Free Public Library	Louise Merriman	10,707
Newburgh	Free Library	Lillian O. Estabrook	39,887
Niagara Falls	Public Library	Earl W. Browning	25,000
North Tonawanda	do	Mrs. Mary T. Warren	15,587
Norwich	Guernsey Memorial Library	N. Louise Ruckteshler	14,056
Nyack	Nyack Library	Helen L. Powell	10,482
Ogdensburg	Public Library	Mary K. Hasbrouck	19,363
Olean	do	Mabel [illegible] Brooks	11,000
Oneonta	do	Mrs. Elizabeth W. Blackall	15,538
Ossining	do	Almira A. LeFevre	16,012
Oswego	City Library	Robert S. Kelsey	9,000
Owego	Coburn Free Library	Nano Loring	11,0[illegible]
Oxford	Memorial Library	Lillian J. Emerson	7,45[illegible]
Oyster Bay	Free Library	Lulie P. Sammis	7,6[illegible]
Palmyra	Kings Daughters Free Library	Mary S. Aldrich	5,37[illegible]
Patchogue	Public Library	Mrs. Alma P. Custead	7,100
Peekskill	Field Library	Julia A. Sprague	11,351
Penn Yan	Public Library	Henrietta H. Kimball	9,068
Plattsburg	do	Ernest S. Hall	17,221
Port Henry	Sherman Free Library	Anna L. Walton	9,112
Port Jervis	Free Library	Margaret B. Marsh	21,171
Potsdam	Public Library and Reading Room.	Mrs. Sadie A. Bixby	7,975
Poughkeepsie	Adriance Memorial Library	John C. Sickley	57,045
Rensselaer	Bath-on-Hudson Public Library.	Alice Ashton	3,675
Rochester	Public Library	William F. Yust	78,500
Do	Reynolds Library	Annie R. Collins	82,307
Rockville Center	Public Library	Dorothy M. Conner and Mrs. A. H. Becker, acting.	8,893
Rome	Jervis Library Association	Eugenie Stevens	18,574
Rye	Free Reading Room	Luella Otis Beaman	7,349
Sag Harbor	John Jermain Memorial Library.	Mrs. Olive P. Young	12,016
Salem	Bancroft Public Library	Frances F. Leighton	12,000
Saranac Lake	Free Library	Miss H. B. Wicker	7,100
Saugerties	Public Library	Alida A. MacAdam	10,100

XXX.—LIBRARIANS OF PUBLIC AND SOCIETY LIBRARIES—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
YORK—continued.			
ectady	Public Library	Henry Glen	43,224
Falls	Myndorse Library	Ellen F. Wickes	4,922
r Island	Public Library	Mrs. M. H. Conklin	6,892
urne	do	Adelaide E. Harrington	7,622
ıan	Minerva Free Library	Florence E. Hawley	6,670
y	Public Library	Bessie Talcott	7,520
ateles	Library Association	Lydia H. Cobane	16,010
y	Public Library	Cornelia Mertens	8,000
ampton	Rogers Memorial Library	Julia W. Foster	12,517
gville	Public Library	Lucy A. Bensley	9,945
use	do	Paul M. Paine	129,999
town	Young Men's Lyceum Library	Flora C. Millard	13,954
wanda	Public Library	Mrs. Ada M. Rork	8,483
	do	Mary L. Davis	51,478
	do	Caroline M. Underhill	93,809
en	Josephine-Louise Public Library	Ethel S. Leeming	2,920
n	W. B. Ogden Free Library	Mrs. Flora Bassett	6,000
ns-burg	Richards Library	Mary S. Crandall	4,500
w	Public Library	Helen M. Cameron	7,950
loo	Library and Historical Society	Lula M. Clark	7,985
town	Roswell P. Flower Memorial Library.	Samuel A. Hayt	35,000
ville	David A. Howe Public Library	Fannie E. Crittenden	12,875
ield	Patterson Library	Sarah H. Ames	19,748
Plains	Public Library	Clara F. Hopper	23,100
ung	Free Library	Vivian F. Arnold	6,980
rs	Public Library	Helen M. Blodgett	45,000
ORTH CAROLINA.			
ille	Pack Memorial Library	Ann Talbot Erwin	14,147
otte	Carnegie Library	Anne Pierce	9,345
am	Public Library	Mrs. A. F. Griggs	9,000
nia	do	Lottie E. Blake	2,500
sboro	do	Bettie D. Caldwell	15,000
r	Good Will Free Library	A. W. Willis	2,000
h	Olivia Raney Library	Mrs. J. S. Atkinson	15,475
o	State Library	Carrie L. Broughton	46,000
ngton	Public Library	Alice Le Grand	8,809
on-Salem	Carnegie Public Library	Pamela Bynum	9,595
ORTH DAKOTA.			
rck	State Law Library	J. H. Newton	20,000
Lake	Carnegie Library	Marie E. O'Brien	4,879
ıson	Public Library	Zenka I. Trinka	5,192
	do	Winnie Bucklin	13,030
Forks	do	Lillian E. Cook	8,345
town	do	Alice M. Paddock	8,313
	Free Public Library	Margaret Greene	6,646
OHIO.			
	Public Library	Mary P. Edgerton	32,261
ce	Carnegie Free Library	Dorothea Doane	11,150
ula	Public Library	Ethel J. MacDowell	10,250
ntaine	Free Public Library	Laura O. Morgan	8,000
ue	Carnegie-Stahl Public Library	Emma C. Sutter	12,000
	Free Public Library	Alice M. Walt	6,000
us	Public Library	Grace J. Fuller	8,700
	do	Mrs. Carolyn S. McCann	8,000
idge	do	Martha G. Robins	8,000
n	Public Library Association	Mary P. Martin	27,178
	Dorcas Carey Public Library	Margie Sutphen	5,890
othe	Public Library	Burton E. Stevenson	30,000
nati	do	N. D. C. Hodges	540,985
ille	do	Mary E. Wilder	17,000
and	do		600,000
	do	Chella Hutchinson	7,000
bus	do	John J. Pugh	107,000
o	State Library	J. H. Newman	190,000
ant	Carnegie Public Library	Marie T. Brown	12,800
ton	Public Library	Eleanor Olney	11,058
oga Falls	Taylor Memorial Library	Mary L. Graham	6,000
n	Public Library	Electra C. Doren	105,000
ce	do	Jewel Fouke	11,172
are	City Library	Mrs. Margaret Lahr	11,385
iverpool	Carnegie Public Library	Mary H. Hall	11,568
	Elyria Library	Grace M. Petersen	28,971
y	Public Library	Mary B. Morrison	13,[illegible]

XXX.—LIBRARIANS OF PUBLIC AND SOCIETY LIBRARIES—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
OHIO—continued.			
Fremont	Birchard Library	Elizabeth M. Richards	13,500
Galion	Public Library	Estella B. Coyle	6,508
Gallipolis	.....do	Mrs. Addie A. Vanden	7,942
Geneva	Free Public Library	Mrs. Viola A. Wheaton	7,000
Germantown	Public Library	Mrs. Adelaide Taylor	6,474
Greenville	Carnegie Library	Minnie J. Routzong	15,000
Hamilton	Lane Public Library	Mrs. Hattie S. James	15,000
Hillsboro	Public Library	Frances H. Detwiler	10,000
Ironton	Briggs Library	Nellie John Shaw	8,000
Lakewood	Public Library	Roena A. Ingham	17,500
Lancaster	.....do	Ella Hite	11,532
Lebanon	.....do	Jennie Unglesby	8,963
Lima	.....do	Martha Gamble	14,000
Lisbon	Lepper Library	Mrs. M. P. Springer	4,700
London	Public Library	Hattie D. Smith	7,637
Lorain	.....do	Elizabeth K. Steele	11,450
Mansfield	.....do	Helen J. Fox	21,782
Marietta	.....do	Willia D. Cotton	17,000
Marion	.....do	Helen L. Kramer	10,558
Massillon	McClymonds Public Library	Clara Miller	21,402
Medina	Franklin Sylvester Library	Evangeline Johnson	10,044
Mount Vernon	Public Library	Loma P. Arndt	8,575
New Straitsville	.....do	Mrs. Maria E. Martin	6,700
Newark	.....do	Mrs. Neva E. Rees	13,257
Niles	.....do	Ida E. Sloan	6,327
Painesville	.....do	Margaret Kilbourne	13,750
Perrysburg	Way Public Library	Eleanor D. Moderwell	11,500
Portsmouth	Free Public Library	Nana A. Newton	23,000
Salem	Public Library	Mrs. Helen S. Carey	11,732
Sandusky	Library Association	Edna A. Holzaepfel	24,972
Shelby	Marvin Memorial Library	Ella Askew	5,500
Sidney	Public Library	Emma Graham	13,100
Springfield	Warder Public Library	Alice Burrowes	34,700
Tiffin	Public Library	Jessie D. Hershiser	11,790
Toledo	.....do	Herbert S. Hirshberg	125,000
Urbana	.....do	Mrs. Harriet C. Milne	11,000
Van Wert	Brumback Library	Harriet C. Long	25,966
Warren	Public Library	Cornelia G. Smith	22,355
Washington Courthouse	Carnegie Public Library	Elizabeth Johnson	7,000
Wellington	Public Library	Edith E. Robinson	11,000
Wilmington	Carnegie Library	Minnie Farren	6,500
Wooster	Public Library	Myrtle M. Allen	10,800
Xenia	Greene County Library	Etta G. McElwain	17,387
Youngstown	Reuben McMillan Free Library	Joseph L. Wheeler	76.473
Zanesville	John McIntire Public Library	Mary E. Elder	29,109
OKLAHOMA.			
Ardmore	Carnegie Library	Myrtle Jones	6,000
Atoka	Pioneer Club Library	Mrs. A. Telle	3,000
Bartlesville	Carnegie Library	Myrtle Weatherholt	3,500
Chickasha	Carnegie Public Library	Fannie Whitaker	7,500
Cordell	Public Library	Nell Rouer	3,000
Elk City	Carnegie Library	Mrs. J. G. Keen	2,902
El Reno	Carnegie Public Library	Lorna J. Teuscher	6,000
Enid	.....do	Mrs. Cora C. Forter	10,087
Guthrie	Carnegie Library	Margaret Armantrout	13,000
Hobart	.....do	Mrs. J. R. Dale	4,250
Lawton	Public Library	Ann Dunbar	4,460
McAlester	.....do	Mrs. Phoebe E. Hayden	5,500
Muskogee	.....do	Sarah A. Noble	14,230
Oklahoma	Carnegie Public Library	Mary E. Hays	23,000
Do	State Library	E. G. Spilman	75,000
Okmulgee	City Library	Mrs. Izora Ground	4,509
Perry	Carnegie Library	Emilie Le Bris	3,000
Ponca City	.....do	Leah Buchheimer	2,540
Sapulpa	Public Library	Opal W. Craine	3,000
Shawnee	Carnegie Public Library	Mrs. T. S. Funk	12,000
Tulsa	Public Library	Alma R. McGlenn	9,000
Wagoner	Carnegie Library	Leona Bateman	3,247
Woodward	Carnegie Public Library	Mrs. Harry B. Hall	2,000
OREGON.			
Ashland	Free Public Library	Blanche E. Hicks	7,411
Astoria	Public Library	Katherine C. Barker	7,800
Baker	.....do	Lula M. Smith	8,094
Hood River	County Library	Nell Unger	6,413
La Grande	Public Library	Lucia Haley	3,600

XXX.—LIBRARIANS OF PUBLIC AND SOCIETY LIBRARIES—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
EGON—continued.			
ord	Public Library	Elizabeth Robinson	6,847
leton	Umatilla County Library	Sabra L. Nason	14,000
and	Library Association	Mary F. Isom	276,447
ı	Public Library	Flora M. Case	13,300
o	State Library	Cornelia Marvin	135,000
Dalles	Wasco County Library	Corinne A. Metz	14,274
PENNSYLVANIA.			
ndria	Memorial Public Library	E. P. Walker	4,686
town	Free Library	Isabel McC. Turner	15,200
ore	.....do	M. Rebecca Lingenfelter	8,000
ıs	Spalding Memorial Library	Helen Thurston	7,125
er Falls	Carnegie Free Library	Elsie Rayle	14,000
Avon	Public Library	Mary D. Parmely	2,700
yn	Free Library	Ethel M. Johnson	6,000
ehem	Free Library of the Bethlehems	Elizabeth D. Burrows	15,000
nsburg	Public Library		8,253
dock	Carnegie Free Library	George H. Lamb	70,000
ford	Carnegie Public Library	Susan L. Sherman	22,070
ol	Free Library	Mary P. Rogers	4,900
r	.....do	Clara B. McJunkin	5,050
m	Green Free Library	Sadie L. Parsons	8,169
ndale	Free Public Library	Helen Hathaway	4,000
le	J. Herman Bosler Memorial Library.	William Homer Ames	8,137
gie	Andrew Carnegie Free Library	Emma L. Rood	18,000
er	Free Library	Dorothy M. Cochran	11,000
o	West End Free Library	Murtle C. Lehman	6,783
eautville	James A. Stone Memorial Library.	Florence Moulthrop	3,500
ellsville	Carnegie Free Library	Margaret M. Whiteman	15,000
ohocken	Free Library	Mrs. S. M. Aken	5,587
	Public Library	Mrs. Emma A. Dean	7,000
ersport	.....do	Frances I. Niles	7,300
ille	Thomas Beaver Library	Janet Bird	16,385
y	Free Library	Helen M. Serrill	7,000
esne	Carnegie Free Library	Charles E. Wright	27,000
n	Public Library	Henry F. Marx	31,956
od City	.....do	Mrs. Katherine M. Charles	4,119
	.....do	Mrs. Jean A. Hard	64,000
ngton	Fallsington Library	Mary E. Watson	10,000
urg	Free Library	America S. Panton	5,097
clin	Library Association	Mary H. Clarke	10,880
antown	Friends Free Library	Hannah M. Jones	31,703
ver	Public Library	Olive M. Ryder	15,230
sburg	.....do	Alice R. Eaton	21,000
o	State Library	Thomas L. Montgomery	186,000
oro	Union Library	Mrs. Charles E. Yerkes	16,000
ton	Public Library	Alice Willigerod	20,000
estead	Carnegie Library	W. F. Stevens	46,374
sdale	Public Library	R. T. Davies	5,000
na	Free Library	Lillian D. Thompson	3,319
ntown	Abington Library Society	Florence M. Ridpath	12,500
town	Cambria Free Library	L. Helen Berkey	29,000
	Public Library	M. Leona Peterson	7,500
ett Square	Bayard Taylor Memorial Library	Alice W. Swayne	5,200
ıster	A. Herr Smith Memorial Library	Helen E. Myers	16,034
horne	Langhorne Library	Ethel G. Praul	6,800
lowne	Free Public Library	M. Sophronia Beatty	5,500
non	Public Library	Irene A. Klick	7,443
burg	Himmelreicht Memorial Library	Emily Clingan	5,000
Haven	Annie Halenbake Ross Library	Florence Hulings	10,000
eesport	Carnegie Free Library	Marian Price	14,000
h Chunk	Dimmick Memorial Library	Inez Crandle	15,675
ville	Free Public Library	Charlotta M. Campbell	9,000
ı	Free Library	Karlena H. Kruse	7,815
d	Homestead Free Library	Mrs. Linda K. Wallace	3,000
ngahela	Carnegie Free Library	Mrs. S. E. Nicholson	3,743
rose	Susquehanna County Free Library.	F. A. Alden	10,000
t Holly Springs	Amelia S. Given Free Library	Stella Goodyear	5,800
all	Carnegie Library of Homestead	W. F. Stevens	60,000
Castle	Free Public Library	Alice M. Sterling	10,061
on	Newton Library Co	W. E. Martindell	9,000
stown	William McCann Library	Helen A. Bomberger	8,205
ı East	McCord Memorial Library	Rebecca M. Leete	5,500
ont	Public Library	Blanche McIlvaine	6,378
ty	Carnegie Public Library	Emily S. Glezen	15,515

XXX.—LIBRARIANS OF PUBLIC AND SOCIETY LIBRARIES—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
PENNSYLVANIA—contd.			
Philadelphia	Free Library	John Ashurst	534,1[illegible]2
Phoenixville	Public Library of the Phoenixville School District.	Ida M. Wagoner	10,724
Pittsburgh	Carnegie Free Library of Allegheny.	Edward E. Eggers	130,000
Do	Carnegie Library of Pittsburgh	John H. Leete	434,469
Pittston	Free Library	Antoinette L. King	5,501
Pottstown	Public Library		4,727
Pottsville	do	Edith Patterson	11,772
Reading	do	Edward A. Howell	45,000
Ridley Park	Ridley Park Library	Alma L. Deppisch	6,170
Royersford	Free Public Library	Ethel Buzby	5,250
Salisburg	Free Library	E. M. Pearce	2,003
Scottdale	Free Public Library	Edna L. Krouse	12,825
Scranton	Public Library	Henry J. Carr	83,000
Sewickley	do	Harriet D. McCarty	15,475
Spring City	do	Elizabeth Rogers	3,416
Steelton	do	L. E. McGinnes	4,000
Titusville	Benson Memorial Library	Viola G. Hively	11,800
Towanda	Public Library	Bessie Whitney	9,258
Troy	do	Jane Parsons	3,614
Tunkhannock	Free Public Library	Mary Hoadley	3,061
Vandergrift	do	Jennie McKenzie	3,765
Wallingford	Helen Kate Furness Free Library.	Bertha E. Cantner	3,200
Warren	Library Association	Mary C. Weiss	32,000
Washington	Citizens' Free Library	Janet M. Clark	17,862
Wellsboro	Green Free Library	Mabel Deans, acting	14,723
West Chester	Library Association	Sarah P. Bedford	13,880
Wilkes-Barre	Osterhout Free Library	Myra Poland	50,622
Williamsport	James V. Brown Library	O. R. Howard Thomson	27,500
Wyomissing	Public Library	Alice E. Roeder	2,250
Yardley	Yardleyville Library	Dorothy Wightman	5,000
York	Public Library	A. Wanner	15,000
RHODE ISLAND.			
Anthony	Free Library	Myra S. Anthony	1,500
Apponaug	do	Maude Wathey	7,470
Ashaway	do	L. R. Crandall	7,565
Auburn	Public Library	Clara L. Foster	8,000
Barrington	do	Mrs. Erma S. Bradford	13,517
Bristol	Rogers Free Library	George U. Arnold	20,870
Carolina	Public Library	Friend W. Brooks	5,000
Centerdale	Union Library	Frank C. Angell	6,247
Central Falls	Free Public Library	Mrs. Edith H. Simmons	18,000
Crompton	Free Library	Bertha M. Brayton	7,650
East Greenwich	do	Mrs. Ella D. Chapman	10,295
East Providence	Watchemoket Free Public Library.	Mrs. Jennie E. Briggs	10,050
Edgewood	Free Public Library	Alice W. Morse	7,558
Greenville	Public Library	Cora L. Burlingame	5,871
Hope Valley	Langworthy Public Library	Laura S. Yeaw	7,756
Jamestown	Philomenian Library	Mrs. L. C. Hammond	8,794
Kingston	Free Library	Isabel Eddy	9,600
Lakewood	do	Frank B. Wight	6,949
Newport	People's Library	Luella K. Leavitt	33,454
Do	Redwood Library and Athenaeum.	George L. Hinckley	65,839
Oak Lawn	Free Public Library	Ernest L. Sperry	7,729
Pawtucket	Deborah Cook Sayles Public Library.	William D. Goddard	38,683
Peace Dale	Narragansett Library Association.	Alice E. Potter	15,950
Phenix	Pawtuxet Valley Free Library	Velna I. Phillips	10,501
Providence	Public Library	William E. Foster	177,789
Do	State Library	Herbert O. Brigham	44,339
Do. (Cranston St.)	Arlington Public Library	Mary F. Walker	6,048
Do. (Olneyville Station).	Olneyville Free Library	Mrs. Harriet N. Richardson	11,355
Riverside	Public Library	Mary W. Blodget	6,279
Rumford	East Providence Centre Free Library.	Bessie D. Paul	6,180
Shawomet	League Free Library	Mrs. Mary A. S. Lane	6,144
Tiverton	Whitridge Hall Free Library	Mrs. Mary J. S. Stimson	6,805
Warren	George Hail Free Library	Annie L. V. Adams	9,067
Westerly	Public Library	Joseph L. Peacock	46,015
Woonsocket	Harris Institute Library	Ama H. Ward	22,243

XXX.—Librarians of Public and Society Libraries—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
SOUTH CAROLINA.			
Anderson	**Public Library**	**Mrs. G. H. Geiger**	5,600
Charleston	**Library Society**	Ellen M. Fitz Simons	47,000
Columbia	**State Library**	**Mrs. Virginia G. Moody**	50,000
Gaffney	**Carnegie Free Library**	**Mrs. Pratt Pierson**	12,946
Greenville	**Neblett Free Library**	**Mrs. Rebecca Deal**	8,189
Marion	**Public Library**	**Louise McI. McMaster**	6,000
Spartanburg	**Kennedy Free** Library	**Mary M. Baugham**	9,000
Union	Carnegie Free Library	Miss Neely Sartor	4,169
SOUTH DAKOTA.			
Aberdeen	**Alexander** Mitchell Library	Mrs. A. H. Drum	9,402
Deadwood	Public Library	Mrs. Elizabeth S. Phelps	5,607
Lead	**Hearst Free** Library	**Martha E.** Livingston	14,000
Mitchell	**Carnegie** Library	**Alma Thomas, Alice Strong**	9,077
Pierre	....do	Mrs. Maud Russell Carter	6,340
Do	State Library	Doane Robinson	45,000
Redfield	**Carnegie** Library	Myrtle Francis	4,572
Sioux Falls	**Carnegie** Free Library	Alberta A. Caille	17,189
Vermilion	**Carnegie** Library	Bernice Swezey	3,847
Yankton	....do	**Jessie** Bartholomew	4,500
TENNESSEE.			
Chattanooga	Public Library	**Margaret S.** Dunlap	45,794
Harriman	....do	Mrs. R. P. Eaton	6,000
Knoxville	Lawson McGhee Library	**Mary U. Rothrock**	18,202
Memphis	Cossitt Library	Charles D. Johnston	143,7[illegible]3
Nashville	Carnegie Library	**Margaret McE.** Kercheval	81,000
Do	State Library	Mary Skeffington	150,000
Rugby	Hughes Free Public Library	Helen H. Turner	7,000
TEXAS.			
Abilene	Carnegie Public Library	Emma L. Taylor	5,000
Austin	State Library	Elizabeth H. West	37,000
Belton	Carnegie Public Library	Emma Lee	3,[illegible]
Brenham	Public Library	Annette Ray	4,[illegible]
Brownwood	Carnegie Library	Pink U. Noel	4,523
Bryan	Carnegie Public Library	Miss Willie Rogers	5,000
Cleburne	....do	Rebecca Royall	8,831
Coleman	Public Library	Mrs. Cole Lewis	3,000
Corsicana	....do	Mrs. Mattie C. Houston	12,000
Dallas	....do	Betsy T. Wiley	60,000
Denison	XXI Club Library	Mrs. W. C. King	2,500
El Paso	Public Library	Mrs. Maud D. Sullivan	12,826
Fort Worth	Carnegie Public Library	Mrs. Charles Scheuber	35,321
Gainesville	Public Library	Lillian Gunter	4,639
Galveston	Rosenberg Library	Frank C. Patten	63,500
Greenville	Carnegie Library	Ida Pennington	8,000
Houston	Lyceum and Carnegie Library	Julia Ideson	50,000
Lockhart	Dr. Eugene Clark Library	Mae Camp	5,000
Memphis	Carnegie Library	Mrs. W. C. Milam	2,025
Palestine	....do	Mrs. Betty Reagan-Ferguson	3,500
Port Arthur	Memorial Library	Mrs. Edward S. Carter	11,000
San Antonio	Carnegie Library		49,004
Sherman	Public Library	Mrs. Nora K. Weems	5,300
Stamford	Carnegie Library	Mrs. J. D. Green	2,376
Temple	....do	Mrs. W. S. Bands	6,300
Terrell	Carnegie Public Library	Mrs. Preston Cobb	5,555
Tyler	Public Library	Edith A. Phelps	10,150
Vernon	Free Library	Flora E. Lowrey	4,000
Waco	Public Library	Pauline McCauley	24,413
Waxahachie	N. P. Sims Library	Irene D. Gallaway	7,500
Wharton	Public Library	Mrs. L. B. Autla	3,500
Winnsboro	Carnegie Library	Mrs. T. W. Bozeman	2,500
UTAH.			
Cedar City	Public Library	Mrs. E. Crane Watson	3,330
Eureka	....do	Mrs. La V. L. Tomlinson	3,961
Garland	....do	Lillian Astle	2,285
Logan	....do	Margaret Wilkinson	2,022
Manti	....do	Clara Farnsworth	2,855
Moab	....do	Edna Bankhead	2,706
Murray	....do	Vivian Wallace	2,978
Ogden	Carnegie Free Library	Grace W. Harris	21,436
Park City	Public Library		10,000
Payson	....do	**Mrs. Findlayson**	3,150

XXX.—LIBRARIANS OF PUBLIC AND SOCIETY LIBRARIES—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
UTAH—continued.			
Provo	Public Library	Marie Hedquist	8,512
Richfield	do	Mrs. Olena Christiausen	2,486
Richmond	do	Lulu Burnham	2,792
Salt Lake City	do	Joanna H. Sprague	85,848
Do	State Library	H. W. Griffith	17,725
Springville	Public Library	Louise Rowland	2,000
Tooele	do	Ellie Marsden	2,615
VERMONT.			
Barre	Aldrich Public Library	Ruth Parker	12,800
Bellows Falls	Rockingham Free Public Library.	Mrs. Nellie M. Plantier	12,500
Bennington	Free Library	Mrs. Mary A. P. Partenheimer	8,740
Brandon	Free Public Library	Mrs. Ida J. S. Kingsley	7,475
Brattleboro	Free Library	Edith I. Wright	20,944
Burlington	Fletcher Free Library	George D. Smith	40,000
Cavendish	Fletcher Town Library	E. G. White	8,000
Chelsea	Public Library	Mary J. George	9,925
Danby	Griffith Memorial Library	Vera H. Griffith	9,042
Derby Line	Haskell Free Library	O. M. Carpenter	8,926
Fair Haven	Public Library	Mrs. Margaret Colville	6,000
Lyndonville	Cobleigh Public Library	Elizabeth C. Hills	5,065
Manchester	Mark Skinner Library	Eleanor Eggleston	19,694
Middlebury	Public Library	Susan E. Archibald	9,797
Montpelier	Kellogg-Hubbard Library	Evelyn S. Lease	31,404
Do	State Library	George W. Wing	70,000
Newbury	Tenney Memorial Library	Frances M. Atkinson	8,190
Newport	Goodrich Memorial Library	Lizzie M. Sargent	10,327
Pittsford	Maclure Library	Mary R. Allen	8,500
Poultney	Public Library	Lelia M. Vaughan	4,500
Proctor	Free Library	Mary K. Norton	10,000
Randolph	Kimball Public Library	Desier C. Moulton	8,450
Rutland	Free Library	Lucy D. Cheney	22,472
Do	H. H. Baxter Memorial Library	Mrs. A. P. Riker	14,000
St. Albans	Free Library	Bertha C. Jennison	9,000
St. Johnsbury	St. Johnsbury Atheneum	Edward T. Fairbanks	21,000
Springfield	Town Library	Elizabeth McCarthy	9,330
Strafford	Harris Library	Helen D. Moore	7,000
Vergennes	Bixby Memorial Free Library	Edith J. Chamberlin	10,000
Waterbury	Public Library	Bertha E. Joslyn	6,000
Windsor	Library Association	Jennie C. Penniman	17,000
Woodstock	Norman Williams Public Library.	Alice L. Eaton	21,000
VIRGINIA.			
Alexandria	Alexandria Library	Alice J. Green	9,000
Farmville	Public Library	Martha K. Blanton	2,500
Fredericksburg	Wallace Library	Sally N. Gravatt	5,500
Lynchburg	Jones Memorial Library	E. K. Peck, acting	5,000
Newport News	Public Library	Gwendolyn Evans	9,000
Norfolk	do	Mary D. Pretlow	29,292
Orange	Orange Library	Leslie McIntosh	2,000
Portsmouth	Public Library	Esther M. Wilson	9,500
Richmond	State Library	H. R. McIlwaine	115,000
Waynesboro	Public Library	Lillian Fox	2,608
Winchester	Handley Library	C. Vernon Eddy	9,000
WASHINGTON.			
Bellingham	Public Library	Mrs. K. M. Ryan	30,000
Everett	do	Elizabeth R. Topping	12,569
Hoquiam	do	Agnes V. Johnson	6,250
Olympia	State Library	J. M. Kitt	34,000
Ritzville	Public Library	Mrs. Claire L. Miller	6,000
Seattle	do	Judson T. Jennings	206,132
Spokane	do	George W. Fuller	81,492
Tacoma	do	John B. Kaiser	85,451
Walla Walla	do	Ellen G. Smith	15,000
Yakima	do	Eleanor Stephens	9,061
WEST VIRGINIA.			
Bluefield	Public Library	Gertrude Oliver	5,246
Charleston	Department Archives and History.	Wilson M. Foulk	78,028
Do	Public Library	Mrs. Elizabeth von Schlectendahl.	13,880
Do	State Law Library	L. O. Wilson	19,000

XXX.—LIBRARIANS OF PUBLIC AND SOCIETY LIBRARIES—Continued.

Location.	Name of library.	Librarian.	Number bound volumes.
VIRGINIA—contd.			
urg	Public Library	Miss S. Scollay Page	2,200
nt	.....do	Pauline Shriver	3,600
	Carnegie Library	H. F. Grilley	3,967
gton	Public Library	Miss Lewis Harvey	19,276
burg	Carnegie Library	Anna E. Taylor	14,737
ille	Public Library	Bertha E. Chadderdon	4,603
ng	.....do	Etta M. Roberts	38,725
WISCONSIN.			
	Free Public Library	Grace W. Estes	11,358
on	.....do	Agnes L. Dwight	14,285
	Vaughn Public Library	Cécile M. Fennelly	8,362
	Public Library	Kate M. Potter	10,111
Dam	Williams Free Library	Hattie A. Doolittle	10,719
	Public Library	Nellie B. McAlpine	17,614
	.....do	Margaret Biggert	5,986
a Falls	.....do	Marion E. Bryant	9,990
us	.....do	Nellie A. Loomis	5,885
ton	.....do	Hattie B. Greene	6,009
	Aram Public Library	Leila A. Janes	6,168
	Public Library	Helen S. Mathews	7,500
ire	.....do	Laura M. Olsen	25,918
ille	Eager Free Public Library	Mae G. Phillips	6,896
u Lac	Public Library	Callie Wieder	23,461
kinson	Dwight Foster Public Library	Mrs. Winifred L. Davis	5,000
Rapids	T. B. Scott Free Library	Edith L. Rablin	10,100
Bay	Kellogg Public Library	Deborah B. Martin	35,000
rd	Carnegie Free Library	Harriette H. Withrow	4,800
	Public Library	Lucille C. Menkey	5,880
lle	.....do	Mary A. Egan	19,864
na	Free Public Library	Lillian E. Bell	5,918
a	Gilbert M. Simmons Library	Cora M. Frantz	37,000
n	Public Library	Lillian F. Ramsay	5,587
se	.....do	Lilly M. E. Borresen	26,211
eneva	.....do	Gertrude J. Noyes	6,500
	Free Library	Mary A Smith	39,100
	State Library	Gilson G. Glasier	61,000
woc	Public Library	Martha E. Pond	15,436
te	Stephenson Public Library	Gladys May Andrews	16,469
eld	Free Library	Caroline C. Shaw	8,782
a	Elisha D. Smith Library	Lucy L. Pleasants	12,184
onie	Tainter Memorial Free Library	Mrs. Essie Nickerson	13,649
	T. B. Scott Library	Elizabeth Burke	10,000
kee	Public Library	Charles E. McLenegan	350,000
Point	.....do	Margaret A. Crawford	6,012
	Arabut Ludlow Memorial Library.	Katherine Smock	10,321
	Public Library	Ida B. Kellogg	13,507
owoc	.....do	Anna R. Jones	6,100
	Farnsworth Public Library	Malvina G. Clausen	8,589
	Public Library	Edith K. Van Eman	34,793
	Free Public Library	Mary E. Porter	12,523
	Public Library	Frances A. Hannum	34,200
nder	Free Public Library	Jessie W. Bingham	6,964
ke	Public Library	Odile M. Demers	5,500
	.....do	Blanche Thompson	6,600
cis	Salzmann Library	Rev. Dr. A C. Breig	15,000
gan	Public Library	Bertha Marx	16,493
	Free Library	Jennie Scouten	9,398
	Public Library	Edith Recheygl	4,171
Point	.....do	Mary Dunegan	6,906
r	.....do	Blanch L. Unterkircher	37,359
rn	.....do	Mrs. May M. Greenwood	5,849
wn	Free Public Library	Vivian G. Little	8,864
ha	Public Library	Clara E. Shadall	7,591
n	.....do	Clara L. Lindsley	7,988
	.....do	Cora I. Lansing	11,782
tosa	.....do	Grace E. Loveland	7,205
llis	.....do	Winnefred Bailey	4,000
ater	.....do	Ella A. Hamilton	8,898
WYOMING.			
ne	Carnegie Public Library	Mrs. Luella G. Moore	17,000
	State Library	Agnes R. Wright	40,000
on	Uinta County Public Library	Besse N. Blackham	7,959
	Carnegie Public Library	William S. Ingham	12,509

XXXI.—DIRECTORS OF LIBRARY SCHOOLS.

Location.	Name of institution.	Director.
Los Angeles, Cal	Public Library Training School	Marion L. Horton, acting principal.
Riverside, Cal	Riverside Library Service School	Joseph F. Daniels, director.
Sacramento, Cal	California State Library School	Beulah Mumm, in charge.
Atlanta, Ga	Library Training School (Carnegie Library)	Tommie Dora Barker, director.
Urbana, Ill	University of Illinois Library School	Phineas L. Windsor, director.
Boston, Mass	Simmons College School of Library Science	June R. Donnelly, director.
St. Louis, Mo	St. Louis Library School	Arthur E. Bostwick, director.
Albany, N. Y	New York State Library School	James I. Wyer, director.
Brooklyn, N. Y	Pratt Institute School of Library Science	Edward F. Stevens, director.
New York, N. Y	Library School of the New York Public Library	Ernest J. Reece, principal.
Syracuse, N. Y	Syracuse University Library School	Earl E. Sperry, director.
Cleveland, Ohio	Western Reserve Library School (Western Reserve University).	Alice S. Tyler, director.
Pittsburgh, Pa	Carnegie Library School	John H. Leete, director.
Seattle, Wash	University of Washington Library School	William E. Henry, director.
Madison, Wis	Wisconsin Library School (Wisconsin Free Library Commission and the University of Wisconsin).	Matthew S. Dudgeon, director.

XXXII.—DIRECTORS OF SCHOOLS OF PHILANTHROPY.

Location.	Name of institution.	Director.
Chicago, Ill	Chicago School of Civics and Philanthropy	Graham Taylor, president.
Boston, Mass	School for Social Workers	
St. Louis, Mo	St. Louis School of Sociology and Economy	
New York, N. Y	New York School of Philanthropy	Porter R. Lee.
Philadelphia, Pa	Pennsylvania School for Social Service	Bernard J. Newman.
Houston, Tex	Texas School of Civics and Philanthropy	Stuart A. Queen.
Richmond, Va	School of Social Work and Public Health	Henry H. Hibbs, jr.

XXXIII.—EDUCATIONAL BOARDS AND FOUNDATIONS.

Name of board.	President.	Secretary.	Meeting.
Anna T. Jeanes Foundation.	J. H. Dillard, Charlottesville, Va.	John T. Emlen, 4th and Chestnut Sts., Philadelphia, Pa.	New York, N. Y., 1918.
Baron de Hirsch Fund	E. S. Benjamin, 1019 Madison Ave., New York, N.Y.	Max J. Kohler, 52 William St., New York, N. Y.	New York, N. Y., last Sunday in January.
Carnegie Corporation of New York.	Andrew Carnegie, 2 East 91st St., New York, N. Y.	James Bertram, 576 5th Ave., New York, N. Y.	New York, N. Y.
Carnegie Foundation for the Advancement of Teaching.	H. S. Pritchett, 576 5th Ave., New York, N. Y.	Clyde Furst, 576 5th Ave., New York, N. Y.	New York, N. Y.
General Education Board.	Wallace Buttrick, 61 Broadway, New York, N. Y.	Abraham Flexner, 61 Broadway, New York, N. Y.	New York, N. Y., December 5, 1918.
John F. Slater Fund	James H. Dillard, Charlottesville, Va.	Miss G. C. Mann, Charlottesville, Va.	New York, N. Y., December, 1918.
Kahn Foundation for the Foreign Travel of American Teachers.	Nicholas Murray Butler, 116th St. and Broadway, New York, N. Y.	Frank D. Fackenthal, 116th St. and Broadway, New York, N. Y.	
Phelps-Stokes Fund	I. N. Phelps-Stokes, chairman, 100 William St., New York, N. Y.	Anson Phelps-Stokes, Yale University, New Haven, Conn.	New York, N. Y., November, 1918.
Rockefeller Foundation	George E. Vincent, New York, N. Y.	Jerome D. Greene, 61 Broadway, New York, N. Y.	New York, N. Y., December 4, 1918.
Russell Sage Foundation	Mrs. Russell Sage, 604 5th Ave., New York, N. Y.	John M. Glenn, 130 East 22d St., New York, N. Y.	Monthly, October to May, inclusive.

XXXIV.—CHURCH EDUCATIONAL BOARDS AND SOCIETIES.

Name of board.	President.	Secretary.
Council of Church Boards of Education in the United States of America.	James E. Clarke, Nashville, Tenn.	Robert L. Kelly, 19 South La Salle St., Chicago, Ill.
American Baptist Education Society........	Clark W. Chamberlain, Granville, Ohio.	Frank W. Padelford, 706 Ford Bldg., Boston, Mass.
American Christian Convention, Department of Education.	W. G. Sargent, Providence, R. I.	Hugh A. Smith, Warren, Ind.
American Unitarian Association, Committee on Education.	....	
Congregational Education Society...........	C. F. Swift, Denver, Colo....	Frank M. Sheldon, 14 Beacon St., Boston, Mass.
Disciples of Christ, Board of Education......	R. H. Crossfield, Lexington, Ky.	G. D. Edwards, Columbia, Mo.
Evangelical Lutheran Church, Board of Education.	A. J. Turkle, 11 Riverview Ave., Pittsburgh, Pa.	E. E Blint, Leechburg, Pa.
Mennonites of North America, General Conference, Board of Education.	H. H. Ewert, Gretna, Manitoba.	J. H. Langenwalter, Bluffton, Ohio.
Methodist Episcopal Church, Board of Education.	William F. McDowell, 1509 16th St. N. W., Washington, D. C.	E. S. Tipple, Drew Theological Seminary, Madison, N. J.
Methodist Episcopal Church, South, Board of Education.	W. B. Murrah, Memphis, Tenn.	Stonewall Anderson, 810 Broadway, Nashville, Tenn.
National Baptist Convention, Educational Board.	T. J. Searcy, 385 South Cynthia Place, Nashville, Tenn.	S. E. Griggs, Memphis, Tenn.
Northern Baptist Convention, Board of Education.	E. D. Burton, chairman, University of Chicago, Chicago, Ill.	Frank W. Padelford, 706 Ford Bldg., Boston, Mass.
Presbyterian Church in the United States of America, Board of Education.	Charles Wadsworth, jr., 5854 Overbrook Ave., Philadelphia, Pa.	
Presbyterian Church in the United States of America, College Board.	Edwin A. McAlpin, jr., Madison, N. J.	James E. Clarke, Nashville, Tenn.
Presbyterian Church in the United States (Southern), Executive Committee of Education	Wade Sheltman, Room 410, Urban Bldg., Louisville, Ky.	Henry H. Sweets, 122 South 4th Ave., Louisville, Ky.
Protestant Episcopal Church, General Board of Religious Education.	Daniel S. Tuttle, 74 Vandeventer Place, St. Louis, Mo.	William E. Gardner, 289 4th Ave., New York, N. Y.
Reformed Church in America, Board of Education.	Elias W. Thompson, 25 East 22d St., New York, N. Y.	John G. Gebhard, 25 East 22d St., New York, N. Y.
Society of Friends, 5-years' meeting, Board of Education.	David M. Edwards, Earlham College, Earlham, Ind.	J. Edwin Jay, Wilmington, Ohio.
Society of Friends, General Conference, Committee on Education.	Bird T. Baldwin, Swarthmore, Pa.	Bertha L. Broomell, 15th and Race Sts., Philadelphia, Pa.
United Evangelical Church, Board of Education	Franklin Schlegel, 441 Chestnut St., Lancaster, Pa.	H. H. Thoren, 1546 Barry Ave., Chicago, Ill.
United Presbyterian Church, Board of Education.	David F. Matchett, 6133 Ellis Ave., Chicago, Ill.	Ralph D. Kyle, 1344 East 63d St., Chicago, Ill.

XXXV.—SUPERINTENDENTS OF CATHOLIC PAROCHIAL SCHOOLS.

[Archdioceses are indicated by an asterisk (*).]

Diocese or archdiocese.	Name and title of supervising officer.	Address.
Albany, N. Y...............	Rev. Joseph A. Dunney, S. T. L., inspector of schools.	454 Western Ave., Albany, N. Y.
Baker City, Oreg...........	Rev. Hugh J. Marshall, diocesan inspector of schools.	Klamath Falls, Oreg.
*Baltimore, Md.............	Rev. Lawrence A. Brown, superintendent (Baltimore City).	Catonsville, Baltimore, Md.
*Boston, Mass...............	Rev. Augustine F. Hickey, S. T. L., diocesan supervisor of schools.	75 Union Park St., Boston, Mass.
Brooklyn, N. Y............	Rev. Joseph V. S. McClancy, inspector of schools.	749 Linwood St., Brooklyn, N. Y.
Buffalo, N. Y..............	Rev. Francis T. Kanaley, superintendent of parochial schools.	1974 Seneca St., Buffalo, N. Y.
Cleveland, Ohio............	Rev. William A. Kane, diocesan superintendent of parochial schools.	1007 Superior Ave., NE., Cleveland, Ohio.
Columbus, Ohio............	Rev. John P. Curran, superintendent of schools	150 East First Ave., Columbus, Ohio.
Crookston, Minn...........	Rev. John P. Funk, diocesan superintendent of schools.	Crookston, Minn.

XXXV.—Superintendents of Catholic Parochial Schools—Continued.

Diocese or archdiocese.	Name and title of supervising officer.	Address.
Erie, Pa	Rev. John M. Gannon, D. D., D. C. L., superintendent of schools.	Meadville, Pa.
Fall River, Mass	Rev. Francis J. Bradley, D. D., diocesan school visitor.	274 Second St., Fall River, Mass.
	Rev. L. Damase Robert, diocesan school visitor.	889 Pine St., Fall River, Mass.
Fargo, N. Dak	Very Rev. John Baker, V. G., inspector of schools.	Valley City, N. Dak.
Fort Wayne, Ind	Rev. A. E. Lafontaine, superintendent of schools.	1140 Clinton St., Fort Wayne, Ind.
Galveston, Tex	Rev. J. B. O'Leary, diocesan director of schools.	Houston Heights, Tex.
Green Bay, Wis	Rev. Peter J. Grosnick, diocesan superintendent of schools.	Manawa, Wis.
Hartford, Conn	Rev. W. J. Fitzgerald, S. T. L., diocesan supervisor of schools.	340 Collins St., Hartford, Conn.
Little Rock, Ark	Right Rev. Thomas V. Tobin, superintendent.	Cathedral, Little Rock, Ark.
Nashville, Tenn	Rev. S. A. Stritch, D. D., supervisor of diocesan schools.	2001 West End Ave., Nashville, Tenn.
*New Orleans, La	Rev. L. J. Kavanagh, superintendent	2432 Napoleon Ave., New Orleans, La.
*New York, N. Y	Rev. Joseph F. Smith, superintendent of schools.	328 West 14th St., New York, N. Y.
	Rev. Michael J. Larkin, S. T. B., superintendent of schools.	308 East 37th St., New York, N. Y.
Newark, N. J	Rev. John A. Dillon, superintendent of schools.	91 Washington St., Newark, N. J.
	Rev. William F. Lawlor, assistant superintendent of schools.	691 Westside Ave., Jersey City, N. J.
*Oregon City, Oreg	Rev. Edwin V. O'Hara, diocesan superintendent of schools.	62 North 16th St., Portland, Oreg.
*Philadelphia, Pa	Rev. John E. Flood, superintendent of parochial schools.	242 South 20th St., Philadelphia, Pa.
	Rev. William P. McNally, assistant superintendent of parochial schools.	Twenty-ninth and Dickinson Sts., Philadelphia, Pa.
Pittsburgh, Pa	Rev. Ralph L. Hayes, D. D., superintendent of schools.	116 North Dithridge St., Pittsburgh, Pa.
Rochester, N. Y	Rev. Joseph S. Cameron, Ph. B., superintendent of schools.	Bath, N. Y.
*St. Louis, Mo	Rev. Patrick Dooley, superintendent of high schools.	1108 North Jefferson Ave., St. Louis, Mo.
*San Francisco, Cal	Rev. Ralph Hunt, S. T. L., superintendent of schools.	1200 Florida St., San Francisco, Cal.
Springfield, Mass	Rev. John F. Conlin, P. R., diocesan school visitor.	Chicopee, Mass.
	Rev. P. F. Doyle, assistant diocesan school visitor.	395 Chestnut St., Springfield, Mass.
Syracuse, N. Y	Rev. Charles F. McEvoy, superintendent of schools.	Cathedral, Syracuse, N. Y.
Toledo, Ohio	Rev. George Johnson, superintendent of parochial schools.	525 Islington St., Toledo, Ohio.
Trenton, N. J	Rev. William J. McConnell, superintendent of parochial schools.	Belmar, N. J.

XXXVI.—JEWISH EDUCATIONAL ORGANIZATIONS.

NATIONAL.

Name.	Presiding officer.	Secretary.
Central Conference of American Rabbis, Religious Education Committee.	Moses J. Gries, Cleveland, Ohio	Joseph S. Kornfeld, Columbus, Ohio.
Council of Jewish Women, Education Committee.	Mrs. Enoch Rauh, 5837 Bartlett St., Pittsburgh, Pa.	Mrs. Leon G. Ball, 507 Shady Ave., Pittsburgh, Pa.
Educational League for the Higher Education of Orphans.	Samuel J. Wolfenstein, 1621 Compton Road, Cleveland, Ohio.	Eugene E. Wolf, 336 Engineers Bldg., Cleveland, Ohio.
Jewish Chautauqua Society	Jacob Goldbaum, Fels & Co., Philadelphia, Pa.	Jeannette M. Goldberg, Jefferson, Tex.
Union of American Hebrew Congregations, Board of Managers of Synagogue and School Extension.	Charles Shohl, First National Bank Bldg., Cincinnati, Ohio.	George Zepin, 62 Duttenhofer Bldg., Cincinnati, Ohio.

XXXVI.—JEWISH EDUCATIONAL ORGANIZATIONS—Continued.

LOCAL.

Name.	Presiding officer.	Secretary.
Hebrew Education Society of Baltimore City.	Baltimore, Md	Hugo Steiner, Law Bldg.
Bureau of Education of the Jewish Community of New York City.	New York, N. Y	M. M. Kaplan, 34 Stuyvesant St.
Educational Alliance	do	Bernard M. L. Ernest, 31 Liberty St.
Hebrew Education Society	Newark, N. J	Leon A. Kohn, 19 Seymour Ave.
Hebrew Education Society of Philadelphia.	Philadelphia, Pa	Bernard Harris, Stephen Girard Bldg.
Jewish Educational and Charitable Association.	St. Louis, Mo	Oscar Leonard, 901 Carr St.
Jewish Educational League	Toledo, Ohio	Sigmond Sanger, 1007 Nicholas Bldg.

XXXVII.—INTERNATIONAL ASSOCIATIONS OF EDUCATION.[1]

American University Union in Europe. Chairman, Anson Phelps Stokes, New Haven, Conn.; secretary, Roger Pierce, Cambridge, Mass.

Association for the International Exchange of Students. Secretary, Henry W. Crees, Caxton House, Westminster, London, England.

Bureau International de Fédérations d'Instituteurs. President, M. Mieras, jr.; secretary, P. Otto, Bloemendaal, Holland.

International Child Welfare League. President, Mrs. Walston Hill Brown, 117 East 21st St., New York, N. Y.; general secretary, Mrs. George L. Wheelock, 331 West 101st St., New York, N. Y.

International Commission on the Teaching of Mathematics. President, G. Klein, Göttingen; general secretary, H. Fehr, 110 Florissant, Geneva, Switzerland.

International Congress on School Hygiene. President, Albert Mathieu, Paris, France.

International Federation for the Development of Drawing and Art Teaching. Address: Léon Genoud, Fribourg, Switzerland.

International Federation of Catholic Alumnae. President, Clare I. Cogan, 6703 Ridge Boulevard, Brooklyn, N. Y.; secretary, Helen R. O'Neil, 259 84th St., Brooklyn, N. Y.

International Kindergarten Union. President, Caroline D. Aborn, Mason St., Boston, Mass.; secretary, May Murray, Springfield, Mass. Next meeting: Baltimore, Md., spring, 1919.

International Moral Education Congress. Permanent commission. Address: M. Spiller, South Hill Park, 63, London, N. W., England.

International Sunday School Association. President, W. O. Thompson, Columbus, Ohio; secretary, Marion Lawrance, 1516 Mallers Bldg., Chicago, Ill. Next meeting: Kansas City, Mo., 1922.

World's Student Christian Federation. President, Dr. Karl Fries, Stockholm, Sweden; secretary, John R. Mott, 124 East 28th St., New York, N. Y.

XXXVIII.—AMERICAN EDUCATIONAL ASSOCIATIONS.

The following list shows, first, the name of the association; second, the name and address of the president; third, the name and address of the secretary; fourth, the place and date of the next meeting.

1. *National and sectional.*

Alumni Association of American Rhodes Scholars: L. W. Cronkhite, Wellesley Hills, Mass.; Frank Aydelotte, Massachusetts Institute of Technology, Boston, Mass.

American Association for the Advancement of Agricultural Teaching: George A. Works, Cornell University, Ithaca, N. Y.; F. E. Heald, Massachusetts Institute of Technology, Boston, Mass.; Baltimore, Md., January 7, 1919.

American Association for the Advancement of Science, Section L: Vice-president, S. A. Courtis, 82 Eliot St., Detroit, Mich.; Bird T. Baldwin, Walter Reed General Hospital, Washington, D. C.; Baltimore, Md., December 23–28, 1918.

American Association for the Study of the Feeble Minded: Charles A. Little, Thiells, N. Y.; J. M. Murdoch, Polk, Pa.; Chicago, Ill., May 29–30, 1919.

American Association of Agricultural College Editors: Bristow Adams, Cornell University, Ithaca, N. Y.; Frank C. Dean, Ohio State University, Columbus, Ohio; Columbus, Ohio, June, 1919.

American Association of College News Bureaus: T. T. Frankenberg, Columbus, Ohio; Bernard Sobel, 1529 Ferry Street, Lafayette, Ind.

American Association of Collegiate Registrars: A. W. Tarbell, Carnegie Institute of Technology, Pittsburgh, Pa.; Ezra L. Gillis, State University of Kentucky, Lexington, Ky.

American Association of Farmers' Institute Workers: Jewell Mayse, Jefferson City, Mo.; Wesley Webb, Dover, Del.; Baltimore, Md., January 8–10, 1919.

American Association of Instructors of the Blind: Thomas S. McAloney, Pittsburgh, Pa.; N. C. Abbott, Nebraska City, Nebr.; 1920.

American Association of Teachers Colleges: Charles McKenny, Ypsilanti, Mich.; J. G. Crabbe, Greeley, Colo.; Chicago, Ill., February, 1919, with the Department of Superintendence, National Education Association.

American Association of Teachers of Journalism: F. N. Scott, University of Michigan, Ann Arbor, Mich.; Lee A. White, Detroit, Mich.; Milwaukee, Wis., probably March, 1919.

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[1] Because of the European war no reports have been received during the past year from many international associations.

American Association of Teachers of Spanish: Lawrence A. Wilkins, 598 West 191st St., New York, N. Y.; Alfred Coester, Commercial High School, Brooklyn, N. Y.; New York, N. Y., December 27-28, 1918.

American Association of University Professors: J. M. Coulter, University of Chicago, Chicago, Ill.; H. W. Tyler, Massachusetts Institute of Technology, Cambridge, Mass.; Christmas holidays, 1918.

American Association to Promote the Teaching of Speech to the Deaf: Edmund Lyon, 1441 East Ave., Rochester, N. Y.; Fred DeLand, acting, 1601 35th St., Washington, D. C.; Philadelphia, Pa., summer, 1920.

American Bar Association, Council on Legal Education: Henry Wade Rogers, Federal Building, New York, N. Y.; Henry M. Bates, Ann Arbor, Mich.

American Bar Association, Section of Legal Education: William A. Blount, Pensacola, Fla.; Charles M. Hepburn, Indiana University Law School, Bloomington, Ind.

American Conference of Pharmaceutical Faculties: Charles S. Jordan, Purdue University, Lafayette, Ind.; Theodore J. Bradley, Boston, Mass.; New York, N. Y., about September 1, 1919.

American Council on Education, 309 Munsey Building, Washington, D. C.: Donald J. Cowling; P. L. Campbell.

American Federation of Arts: Robert W. de Forest, 30 Broad St., New York, N. Y.; Leila Mechlin, 1741 New York Ave., Washington, D. C.; May, 1919.

American Federation of Teachers: Charles B. Stillman, 1620 Lake Ave., Wilmette, Ill.; F. G. Stecker, 1618 Lake Ave., Wilmette, Ill.

American Federation of the Teachers of the Mathematical and Natural Sciences: C. Riborg Mann, 576 Fifth Ave., New York, N. Y.; William A. Hedrick, Central High School, Washington, D. C.; Baltimore, Md., December 29, 1918, with the American Association for the Advancement of Science.

American Home Economics Association: Edna N. White, Columbus, Ohio; Cora M. Winchell, Teachers College, New York, N. Y.; June, 1919.

American Humane Education Society: Francis H. Rowley, 180 Longwood Ave., Boston, Mass.; Guy Richardson, 180 Longwood Ave., Boston, Mass.; Boston, Mass., March 25, 1919.

American Institute of Dental Teachers: A. W. Thornton, Montreal, Quebec; Abram Hoffman, 381 Linwood Ave., Buffalo, N. Y.; January 28-30, 1919.

American Institute of Instruction: Wallace E. Mason, Keene, N. H.; John J. Mahoney, Lowell, Mass.; Boston, Mass., November 14-16, 1918.

American Medical Association, Council on Medical Education: Chairman, Horace D. Arnold, Office Surgeon General, Washington, D. C.; N. P. Colwell, 535 North Dearborn St., Chicago, Ill.; Chicago, Ill., February 10, 1919.

American Nature-Study Society: S. C. Schmucker, Westchester, Pa.; Mrs. Anna B. Comstock, Cornell University, Ithaca, N. Y.; Baltimore, Md., December, 1918, with the American Association for the Advancement of Science.

American Physical Education Association: William Burdick, Baltimore, Md.; Mrs. P. B. McCurdy, 93 Westford Ave., Springfield, Mass.; Chicago, Ill., spring, 1919.

American Posture League: Jessie H. Bancroft, 164 Sterling Place, Brooklyn, N. Y.; Henry L. Taylor, 125 West 58th St., New York, N. Y.; New York, N. Y., March, 1919.

American School Hygiene Association: Frances E. Fronczak, Buffalo, N. Y.; William A. Howe, State Education Building, Albany, N. Y.; probably Chicago, Ill.

American School Peace League: Randall J. Condon, Cincinnati, Ohio; Mrs. Fannie F. Andrews, 405 Marlborough St., Boston, Mass.; with the National Education Association.

American Society for the Extension of University Teaching: Henry LaBarre Jayne, 505 Chestnut St., Philadelphia, Pa.; William K. Huff, 730 Witherspoon Building, Philadelphia, Pa.; Philadelphia, Pa.

Associated College Newspaper Publishers: Thomas G. Schaeffle, Columbia University, New York, N. Y.; Horace H. Nahm, Columbia University, New York, N. Y.

Associated Harvard Clubs: F. W. Burlingham, 821 Corn Exchange Bank Building, Chicago, Ill.; E. M. Grossman, 820 Rialto Building, St. Louis, Mo.

Association of Alumni Secretaries: Levering Tyson, Columbia University, New York, N. Y.; Charles Jackson, 70 State St., Boston, Mass.

Association of American Agricultural Colleges and Experiment Stations: Eugene Davenport, Urbana, Ill.; J. L. Hills, Vermont Experiment Station, Burlington, Vt.; Baltimore, Md., January 8-10, 1919.

Association of American Colleges: Donald J. Cowling, Northfield, Minn.; Robert L. Kelly, 19 South La Salle St., Chicago, Ill.; Chicago, Ill., January 9-11, 1919.

Association of American Instructors of the Deaf: Percival Hall, Gallaudet College, Washington, D. C.; Frank M. Driggs, Ogden, Utah; Philadelphia, Pa., 1920.

Association of American Law Schools: Harlan F. Stone, Columbia Law School, New York, N. Y.; Eugene A. Gilmore, University of Wisconsin Law School, Madison, Wis.

Association of American Library Schools: Sarah C. N. Bogle, Carnegie Library School, Pittsburgh, Pa.; Florence R. Curtis, University of Illinois Library School, Urbana, Ill.; probably December, 1918.

Association of American Medical Colleges: W. J. Means, Columbus, Ohio; Fred C. Zapffe, 3431 Lexington St., Chicago, Ill.; Chicago, Ill., February 11, 1919.

Association of American Universities: Representative of Indiana University, Bloomington, Ind.; Herman V. Ames, University of Pennsylvania, Philadelphia, Pa.

Association of Biblical Instructors in American Colleges and Secondary Schools: C. F. Kent, Yale University, New Haven, Conn.; Raymond C. Knox, Columbia University, New York, N. Y.

Association of Business Officers of the State Universities and Colleges of the Middle West: M. E. McCaffrey, University of Wisconsin, Madison, Wis.; W. H. Bates, State University of Iowa, Iowa City, Iowa; Chicago, Ill., May, 1919.

Association of Church Directors of Religious Education: Hugh R. Orr, Pittsburgh, Pa.; Mary Lawrance, 16 Cross St., Montclair, N. J.; March, 1919.

Association of City Training School Teachers: John F. Thomas, City Normal School, Detroit, Mich.; Henrietta V. Race, Normal School, Louisville, Ky.

Association of Colleges and Preparatory Schools of the Middle States and Maryland: Virgil Prettyman, Horace Mann School for Boys, New York, N. Y.; George W. McClelland, University of Pennsylvania, Philadelphia, Pa.; Princeton, N. J., November 29-30, 1918.

Association of Colleges and Secondary Schools of the Southern States: Charles G. Maphis, University, Va.; E. A. Bechtel, Tulane University, New Orleans, La.; probably New Orleans, La., November, 1918.

Association of Colleges for Negro Youth: M. W. Adams, Atlanta University, Atlanta, Ga.; George E. Haynes, Department of Labor, Washington, D. C.; Nashville, Tenn., November, 1918.

Association of Collegiate Alumnae: Mrs. Lois K. Rosenberry, 501 Wisconsin Ave., Madison, Wis.; Mrs. Gertrude S. Martin, 934 Stewart Ave., Ithaca, N. Y.; St. Louis, Mo., June, 1919.

Association of Collegiate Schools of Architecture: Warren Powers Laird, University of Pennsylvania, Philadelphia, Pa.; Clarence A. Martin, Cornell University, Ithaca, N. Y.; with the American Institute of Architects.

Association of Cosmopolitan Clubs: E. W. Burgess, 6025 Kimbark Ave., Chicago, Ill.; Thomas E. Oliver, University of Illinois, Urbana, Ill.; Chicago, Ill., December 26-28, 1918.

Association of Directors of Physical Education for Women: Rachel Hardwick, Boston University, Boston, Mass.; Elizabeth A. Wright, Radcliffe College, Cambridge, Mass.; Cambridge, Mass., April, 1919.

Association of History Teachers of the Middle States and Maryland: Livingston R. Schuyler, College of the City of New York, New York, N. Y.; Daniel C. Knowlton, Central High School, Newark, N. J.; Princeton, N. J., November 29-30, 1918.

Association of Military Colleges and Schools: W. G. Kable, Staunton, Va.; W. H. Steele, Staunton, Va.; Staunton, Va., March 22, 1919.

Association of Modern Language Teachers of the Central West and South: K. McKenzie, Urbana, Ill.; C. H. Handschin, Oxford, Ohio; Chicago, Ill., April, 1919.

Association of Presidents and Past Presidents of State and National Music Teachers' Associations: E. R. Lederman, Centralia, Ill.: Arthur L. Manchester, Hardin College, Mexico, Mo.; Chicago, Ill., July, 1919.

Association of Schools, Colleges, and Seminaries of the Reformed Church: Henry H. Apple, Lancaster, Pa.; George L. Omwake, Collegeville, Pa.

Association of Teachers of Mathematics in New England: Harry B. Marsh, Technical High School, Springfield, Mass.: H. D. Gaylord, 448 Audubon Road, Boston, Mass.; Boston, Mass., December 7, 1918.

Association of Teachers of Mathematics in the Middle States and Maryland: H. E. Hawkes, Columbia University, New York, N. Y.; E. H. Koch, jr., Newark, N. J.; Princeton, N. J., November 30, 1918.

Association of Urban Universities: Lemuel H. Merlin, Boston University, Boston, Mass.; Frederick B. Robinson, College of the City of New York, New York, N. Y.: Boston, Mass., November 15-17, 1918.

Catholic Educational Association: Thomas J. Shahan, Catholic University of America, Washington, D. C.: Francis W. Howard, 1651 East Main St., Columbus, Ohio; June, 1919.

Central Association of Science and Mathematics Teachers: Harry D. Abells, Morgan Park, Ill.: A. W. Cavanaugh, Lewis Institute, Chicago, Ill.; Chicago, Ill., November 29-30, 1918.

Central Commercial Teachers' Association: E. C. Bigger, Lincoln, Nebr.: Adelaide Hakes, Gregg School, Chicago, Ill.

Child Education Foundation: C. W. McAlpin, 520 Park Ave., New York, N. Y.; Kenneth G. Kirtland, 128 West 74th St., New York, N. Y.; New York, N. Y., October 1, 1918.

Classical Association of New England: Monroe N. Wetmore, Williams College, Williamstown, Mass.; George E. Howes, Williams College, Williamstown, Mass.; Norton, Mass., spring, 1919.

Classical Association of the Atlantic States: Robert B. English, Washington, Pa.; Charles Knapp, Barnard College, New York, N. Y.; probably April or May, 1919.

Classical Association of the Middle West and South: Campbell Bonner, University of Michigan, Ann Arbor, Mich.; Louis E. Lord, Oberlin, Ohio; Easter week, 1919.

Classical Association of the Pacific States, Northern Section: Thomas K. Sidey, University of Washington, Seattle, Wash.; Julianne A. Roller, 1145 Ivon St., Portland, Oreg.; Seattle, Wash., probably December 27-28, 1918.

College Art Association of America: John Pickard, Columbia, Mo.; John Shapley, Brown University, Providence, R. I.; probably Cleveland, Ohio.

College Conference on English in the Central Atlantic States: James W. Tupper, Lafayette College, Easton, Pa.: W. O. Sypherd, Delaware College, Newark, Del.

College Entrance Examination Board: Chairman, Robert N. Corwin, Sheffield Scientific School, New Haven, Conn.; Thomas S. Fiske, 431 West 117th St., New York, N. Y.; New York, N. Y., November 2, 1918.

Commission on Accredited Schools of the Association of Colleges and Secondary Schools of the Southern States: W. H. Hand, Knoxville, Tenn.: Harry Clark, Knoxville, Tenn.; probably New Orleans, La., November, 1918.

Committee of Fifteen on Educational Preparation for Foreign Service (with Advisory Council): Glen Levin Swiggett, Bureau of Education, Washington, D. C.

Committee on Friendly Relations Among Foreign Students: Cleveland H. Dodge, 99 John St., New York, N. Y.; Charles D. Hurrey, 347 Madison Ave., New York, N. Y.

Committee on Patriotism through Education of the National Security League: Director, Robert McNutt McElroy, 19 West 44th St., New York, N. Y.; Mrs. Thomas J. Preston, jr., 19 West 44th St., New York, N. Y.

Conference of Church Workers in State Universities: Thomas R. Evans, Princeton, N. J.; Roy Hamilton, 938 Lincoln Pl., Boulder, Colo.: Columbus, Ohio, January 4-6, 1919.

Conference of Colleges of the Interior: Secretary, Walter H. Rollins, Fairmount College, Wichita, Kans.

Conference of Superintendents and Principals of Schools for the Deaf in the United States and Canada: J. W. Jones, School for the Deaf, Columbus, Ohio; Frank M. Driggs, Ogden, Utah; St. Augustine, Fla.

Conference on Universities and Public Service: Secretary, Edward A. Fitzpatrick, Box 380, Madison, Wis.

Daughters of the American Revolution, Committee on Patriotic Education: Chairman, Lotte E. Jones, 112 West North St., Danville, Ill.

Drama League of America: Philip D. Sherman, Oberlin College, Oberlin, Ohio; Alice M. Houston, 1426 Forrest Ave., Evanston, Ill.

Eastern Arts Association: Augustus F. Rose, Providence, R. I.; Fred P. Reagle, Board of Education, Montclair, N. J.

Eastern Association of Physics Teachers: Charles B. Farrington, Newtonville, Mass.: Alfred M. Butler, 198 Park St., West Roxbury, Mass.: Boston, Mass., October, 1918.

Eastern Commercial Teachers' Association: H. G. Healey, 609 West 158th St., New York, N. Y.; D. A. McMillin, Central High School, Newark, N. J.; Springfield, Mass., April 17-19, 1919.

Eastern Music Supervisors' Conference: Ralph L. Baldwin, Hartford, Conn.: Richard W. Grant, Somerville, Mass.; probably New York, N. Y., April, 1919.

Educational Aid Society, 437 First National Bank Building, Chicago, Ill.: Harry J. Myers; Elizabeth M. Phillips; Chicago, Ill., January 14, 1919.

Educational Association of the Methodist Episcopal Church: W. H. McMaster, Alliance, Ohio; Hubert Phillips, Onarga, Ill.: Chicago, Ill., January, 1919.

Educational Dramatic League: Mrs. August Belmont, 105 West 40th St., New York, N. Y.; Miss Marion A. Turner, 105 West 40th St., New York, N. Y.

Educational Press Association of America: Henry C. Williams, Columbus, Ohio; George L. Towne, University Publishing Company, Lincoln, Nebr.: Chicago, Ill., February, 1919, with the Department of Superintendence, National Education Association.

Farmers' Educational Cooperative Union of America: O. P. Ford, McFall, Ala.: Miss Lutie B. Wyatt, 2130 Maine Ave., Birmingham, Ala.

Federación de Estudiantes Latino-Americanos: Secretary, J. M. Hermández, Ann Arbor, Mich.

Federation for Child Study: Mrs. Howard S. Gans, 101 West End Ave., New York, N. Y.; Miss Sonia Ureles, 2 West 64th St., New York, N. Y.; New York, N. Y., November 6, 1918.

Federation of Modern Language Teachers' Associations: Robert H. Fife, jr., Middletown, Conn.: Bertha Vogel, South Boston High School, Boston, Mass.; probably New York, N. Y., December 1, 1918.

Head Masters' Association: Frederick Winsor, Concord, Mass.; Arthur F. Warren, 241 West 77th St., New York, N. Y.; Boston, Mass., February 7-8, 1919.

Head Mistresses' Association of the Middle West: L. Gertrude Angell, Buffalo, N. Y.; Grace L. Jones, Columbus School for Girls, Columbus, Ohio; January, 1919.

Inland Empire Council of Teachers of English: F. M. Padelford, Seattle, Wash.; L. W. Sawtelle, Sheridan, Oreg.; Spokane, Wash., April, 1919.

Inland Empire Teachers' Association: Ethel E. Redfield, Boise, Ida.; J. A. Burke, E. 2225 Illinois Ave., Spokane, Wash.; Spokane, Wash., Spring, 1919.

Lake Mohonk Conference of Friends of the Indian and other Dependent Peoples: Presidency vacant; H. C. Phillips, Mohonk Lake, N. Y.

Land Grant College Engineering Association: W. M. Riggs, Clemson College, S. C.; A. A. Potter, Manhattan, Kans.; Baltimore, Md., November 13–15, 1918.

Lutheran Education Society: William E. Schlake, 111 W. Washington St., Chicago, Ill.; C. J. Schwanke, 3305 N. Hamilton Ave., Chicago, Ill.; Chicago, Ill., April 24, 1919.

Middle West Society of Physical Education and Hygiene: M. I. Foss, 5315 Drexel Ave., Chicago, Ill.; Katherine Cronin, 5306 Woodlawn, Chicago, Ill.; Chicago, Ill., with American Physical Education Society.

Missionary Education Movement of the United States and Canada: Samuel Thorne, jr., 27 Cedar St., New York, N. Y.; Ernest F. Hall, 160 Fifth Ave., New York, N. Y.; New York, N. Y., January, 1919.

Mississippi Valley Historical Association, Teachers' Section: R. M. Tryon, University of Chicago, Chicago, Ill.; Howard C. Hill, University High School, Chicago, Ill.; St. Louis, Mo., May, 1919.

Missouri Valley Commercial Teachers' Association: S. J. Shook, Topeka, Kans.; Mrs. E. M. Platt, 801 Francis St., St. Joseph, Mo.; Kansas City, Mo., November, 1918.

Modern Language Association of the Middle States and Maryland: Marion P. Whitney, Poughkeepsie, N. Y.; Anna W. Ballard, Columbia University, New York, N. Y.; Princeton, N. J., November 30, 1918.

Music Teachers' National Association: Charles N. Boyd, 4259 Fifth Ave., Pittsburgh, Pa.; William Benbow, 725 Elmwood Ave., Buffalo, N. Y.; St. Louis, Mo.; December 30, 1918–January 1, 1919.

National Associated Schools of Scientific Business: W. N. Ferris, Big Rapids, Mich.; Sherwin Cody, 189 West Madison St., Chicago, Ill.; New York, N. Y., November 29–30, 1918.

National Association for the Study and Education of Exceptional Children: Theodore Stempfel, Indianapolis, Ind.; Waldemar H. Groszmann, Plainfield, N. J.

National Association of Accredited Commercial Schools: B. F. Williams, Des Moines, Iowa; H. E. V. Porter, Jamestown, N. Y.; Chicago, Ill., December 26, 1918.

National Association of Corporation Schools: H. M. Rowe, Baltimore, Md.; F. C. Henderschott, Irving Place and 15th St., New York, N. Y.; Chicago, Ill., June, 1919.

National Association of Dental Faculties: Herbert C. Miller, Fifteenth and Couch Sts., Portland, Oreg.; C. C. Allen, Tenth and Troost Sts., Kansas City, Mo.; New Orleans, La.

National Association of Directors of Educational Research: R. B. Buckingham, Madison, Wis.; E. J. Ashbaugh, Iowa City, Iowa; Chicago, Ill., February, 1919, with the Department of Superintendence, National Education Association.

National Association of French Teachers in America: Auguste George, 100 St. Nicholas Ave., New York, N. Y.; Eugene Maloubier, 129 Columbia Heights, Brooklyn, N. Y.; New York, N. Y., September 28 1918.

National Association of High School Supervisors and Inspectors: J. D. Elliff, University of Missouri, Columbia, Mo.; J. J. Didcoct, Peabody Teachers College, Nashville, Tenn.; Chicago, Ill., February, 1919, with the Department of Superintendence, National Education Association.

National Association of Penmanship Supervisors: C. A. Barnett, 307 Board of Education, Cleveland, Ohio; H. W. Huntsinger, Spencerian Commercial School, Cleveland, Ohio.

National Association of Public School Building Officers: C. W. Handman, Board of Education, Cincinnati, Ohio; R. M. Milligan, Commissioner of School Buildings, St. Louis, Mo.; Rochester, N. Y., November 13, 1918.

National Association of School Accounting and Business Officers: J. S. Mullan, Rochester, N. Y.; E. C. Baldwin, Boston, Mass.; Cleveland, Ohio, May, 1919.

National Association of Secondary School Principals: W. D. Lewis, William Penn High School for Girls, Philadelphia, Pa.; H. V. Church, Cicero, Ill.; Chicago, Ill., February, 1919.

National Association of State Supervisors and Inspectors of Rural Schools: Lee L. Driver, Winchester, Ind.; Julia M. Stone, Topeka, Kans.; Chicago, Ill., February, 1919, with the Department of Superintendence, National Education Association.

National Association of State Universities in the United States of America: Guy P. Benton, University of Vermont, Burlington, Vt.; F. L. McVey, University of Kentucky, Lexington, Ky.; Washington, D. C., November 11–12, 1918.

National Association of Teachers' Agencies: Willard W. Andrews, 81 Chapel St., Albany, N. Y.; A. P. Goddard, 19 South La Salle St., Chicago, Ill.; Chicago, Ill., February 24–March 1, 1919, with the Department of Superintendence, National Education Association.

National Association of Teachers in Colored Schools: S. G. Atkins, Winston-Salem, N. C.; S. X. Floyd, Augusta, Ga.; Orangeburg, S. C., July 30–August 3, 1919.

National Association of Teachers of Speech: Howard S. Woodward, Western Reserve University, Cleveland, Ohio; C. H. Thurber, Purdue University, Lafayette, Ind.; Chicago, Ill., December 26–28, 1918.

National Child Labor Committee: Chairman, Felix Adler, 33 Central Park West, New York, N. Y.; Owen R. Lovejoy, 105 East 22d St., New York, N. Y.

National Child Welfare Association: William M. Kingsley, 70 Fifth Ave., New York, N. Y.; Charles F. Powlison, 70 Fifth Ave., New York, N. Y.

National Collegiate Athletic Association: Palmer E. Pierce, War College, Washington, D. C.; Frank W. Nicolson, Wesleyan University, Middletown, Conn.; New York, N. Y., December, 1918.

National Commercial Teachers' Federation: James C. Reed, Whitewater, Wis.; Otis L. Trenary, Kenosha, Wis.; Chicago, Ill., December, 1919.

National Community Center Association: John Collier, 70 5th Ave., New York, N. Y.; Edward L. Burchard, 1415 East 57th St., Chicago, Ill.; probably Chicago, Ill., February, 1919.

National Conference Committee on Standards of Colleges and Secondary Schools: A. Ross Hill, University of Missouri, Columbia, Mo.; Frank W. Nicolson, Middletown, Conn.; New York, N. Y., February, 1919.

National Conference of Deans of Women: Kathryn S. McLean, Ohio Wesleyan University, Delaware, Ohio; Anne D. Blitz, William-Smith College, Geneva, N. Y.; Chicago, Ill., February, 1919, with the Department of Superintendence, National Education Association.

National Conference of Music Supervisors: Osbourne McConathy, Evanston, Ill.; Mabelle E. Glenn, Bloomington, Ill.

National Conference on the Education of Truant, Backward, Dependent, and Delinquent Children: Hobart H. Todd, Industry, N. Y.; Charles H. Johnson, Albany, N. Y.; Atlantic City, N. J.

National Council of Executive and Administrative Women in Education: Ada Van Stone Harris, Pittsburgh, Pa.; Ethel C. Redfield, Boise, Idaho; Chicago, Ill., February, 1919, with the Department of Superintendence, National Education Association.

National Council of Geography Teachers: Albert P. Brigham, Hamilton, N. Y.; George J. Miller, Mankato, Minn.

National Council of Normal School Presidents and Principals: J. A. Pitman, Salem, Mass.; Charles H. Cooper, Mankato, Minn.; Chicago, Ill., February 21–22, 1919.

National Council of Primary Education: Chairman, Ella Victoria Dobbs, University of Missouri, Columbia, Mo.; Chicago, Ill., February, 1919, with the Department of Superintendence, National Education Association.

National Council of Teachers of English: Edwin L. Miller, Northwestern High School, Detroit, Mich.; James F. Hosic, Chicago Normal College, Chicago, Ill.; Chicago, Ill., November 28-30, 1918.

National Education Association: George D. Strayer, Teachers College, Columbia University, New York, N. Y.; James W. Crabtree, 1400 Massachusetts Ave., Washington, D. C.; Milwaukee, Wis., June 29-July 5, 1919.

National Education Association, Department of Superintendence: E. C. Hartwell, St. Paul, Minn.; Marie Gugle, Columbus, Ohio; Chicago, Ill., February 24-March 1, 1919.

National Education Association, National Council of Education: W. B. Owen, Normal School, Chicago, Ill.; Adelaide S. Baylor, 2308 Park Ave., Indianapolis, Ind.; Chicago, Ill., February 24-March 1, 1919.

National Educators' Conservation Society: Charles L. Bristol, 1013 Prospect Place, Brooklyn, N. Y.; Nomer Gray, 1013 Prospect Place, Brooklyn, N. Y.; New York, N. Y., January 15, 1919.

National Federation of College Women: Mrs. Myra K. Miller, Long Beach, Cal.; Mrs. Harriet H. Barry, Monrovia, Cal.; probably Chicago, Ill., 1919.

National Federation of State Education Associations: Charles S. Foos, Reading, Pa.; Henry J. Neal, Phillipsburg, N. J.; Chicago, Ill., February, 1919, with the Department of Superintendence, National Education Association.

National German-American Teachers' Association (Nationaler Deutsch-Amerikanischer Lehrerbund): President, Leo Stern, 939 2d St., Milwaukee, Wis.

National Kindergarten Association: Bradley Martin, 8 West 40th St., New York, N. Y.; Bessie Locke, 8 West 40th St., New York, N. Y.; New York, N. Y., November, 1919.

National League for Life Assurance Education: Secretary, T. R. Weddell, Insurance Exchange, Chicago, Ill.; Chicago, Ill., September 17, 1918.

National League of Compulsory Education Officials: Charles A. McCall, City Hall, Newark, N. J.; T. P. Twiggs, 254 Lathrop Ave., Detroit, Mich.; St. Louis, Mo., November 20-22, 1918.

National League of Nursing Education: S. Lillian Clayton, Philadelphia General Hospital, Philadelphia, Pa.; Laura R. Logan, Cincinnati General Hospital, Cincinnati, Ohio; Chicago, Ill.

National League of Teacher-Mothers: Ella Frances Lynch, Bryn Mawr, Pa.

National League of Teachers' Associations: Sallie Hill, 1020 Emerson St., Denver, Colo.; Grace Benton, 715 North Nevada Ave., Colorado Springs, Colo.

National Society for Broader Education: Guy Carleton Lee, Carlisle, Pa.; H. H. Langsdorf, 168 West High St., Carlisle, Pa.; New York, N. Y., January 1, 1919.

National Society for the Study and Correction of Speech Disorders: Walter B. Swift, 110 Bay State Road, Boston, Mass.; Marguerite R. Franklin, 110 Bay State Road, Boston, Mass.; Cleveland, Ohio, December 2, 1918.

National Society for the Study of Education: George D. Strayer, Columbia University, New York, N. Y.; Guy M. Whipple, Carnegie Institute of Technology, Pittsburgh, Pa.; Chicago, Ill., February, 1919, with the Department of Superintendence, National Education Association.

National Society for Vocational Education: David Snedden, Teachers College, Columbia University, New York, N. Y.; May Allinson, 140 West 42d St., New York, N. Y.; St. Louis, Mo., February 20-22, 1919.

National Society of College Teachers of Education: W. C. Bagley, Teachers College, Columbia University, New York, N. Y.; Guy M. Wilson, Iowa State Agricultural College, Ames, Iowa; Chicago, Ill., February, 1919, with the Department of Superintendence, National Education Association.

National Speech Arts Association: Charles M. Holt, 60-62 11th St., South, Minneapolis, Minn.; Jessie E. Tharp, 3425 Prytania St., New Orleans, La.

National Story Tellers League: President, Richard T. Wyche, 3 Kennedy St., Washington, D. C.; Brooklyn, N. Y., October 15-16, 1918.

National University Extension Association: C. B. Robertson, University of Pittsburgh, Pittsburgh, Pa.; W. H. Lighty, University of Wisconsin, Madison, Wis.; Chicago, Ill., February 27-March 1, 1919.

National Vocational Art and Industrial Federation; Secretary, Mrs. Robert L. McCall, 4714 Washington Boulevard, Chicago, Ill.

National Vocational Guidance Association: Frank V. Thompson, Boston, Mass.; Roy W. Kelley, Harvard University, Cambridge, Mass.

New England Association of Chemistry Teachers: George A. Cowen, Jamaica Plain, Mass.; S. W. Hoyt, Mechanic Arts High School, Boston, Mass.

New England Association of College Teachers of Education: J. F. Messenger, University of Vermont, Burlington, Vt.; S. Monroe Graves, Wellesley Hills, Mass.

New England Association of Colleges and Secondary Schools: Ellen F. Pendleton, Wellesley, Mass.; Walter B. Jacobs, Brown University, Providence, R. I.; Boston, Mass., December 6-7, 1918.

New England Association of School Superintendents: Fred H. Nickerson, Medford, Mass.; Francis McSherry, Holyoke, Mass.; Boston, Mass., probably November 14-16, 1918.

New England Association of Teachers of English: Walter S. Hinchman, Groton School, Groton, Mass.; A. B. de Mille, Milton Academy, Milton, Mass.; Boston, Mass., November 16, 1918.

New England College Entrance Certificate Board: Angie C. Chapin, Wellesley College, Wellesley, Mass.; Frank W. Nicolson, Middletown, Conn.; Boston, Mass., April, 1919.

New England Federation of High School Commercial Teachers: Raymond G. Laird, Boston, Mass.; W. O. Holden, Pawtucket, R. I.; Boston, Mass., November 16, 1918.

New England History Teachers' Association: Harry M. Varrell, Simmons College, Boston, Mass.; Horace Kidger, Technical High School, Newtonville, Mass.; probably Boston, Mass., October, 1918.

New England Home Economics Association: Mrs. S. F. Herron, Winchester, Mass.; Mrs. Edith H. Brown, 206 Brookline Ave., Boston, Mass.

New England Modern Language Association: Joel Hatheway, High School of Commerce, Boston, Mass.; Bertha Vogel, South Boston High School, Boston, Mass.; Boston, Mass., May 10, 1919.

New England Montessori Association: Mrs. Dillingham, Concord, Mass.; Anne Howe, 354 Marlboro St., Boston, Mass.

New England Penmanship Association: John L. Hayward, Somerville, Mass.; Hazel Waite, Stoughton, Mass.; Boston, Mass., January, 1919.

North Central Association of Colleges and Secondary Schools: George Buck, Indianapolis, Ind.; Henry E. Brown, Kenilworth, Ill.; Chicago, Ill., March 20-22, 1919.

North Central Council of State Normal School Presidents: F. A. Cotton, La Crosse, Wis.; J. G. Crabbe, Greeley, Colo.

Northwest Association of Secondary and Higher Schools: W. M. Kern, Walla Walla, Wash.; Leonard V. Koos, University of Washington, Seattle, Wash.; Spokane, Wash., April 3-4, 1919.

Northwestern Association of History, Government, and Economics Teachers: James Bever, Bellingham, Wash.; Leroy F. Jackson, State College of Washington, Pullman, Wash.

Patriotic Education Society, Inc.: President, Henry A. Wise Wood, 25 Madison Ave., New York, N. Y.

Playground and Recreation Association of America: Joseph Lee, 101 Tremont St., Boston, Mass.; Howard S. Braucher, 1 Madison Ave., New York, N. Y.

Presbyterian Educational Association of the South: Henry H. Sweets, 122 South Fourth Ave., Louisville, Ky.; D. S. Gage, 410 Urban Building, Louisville, Ky.; Montreat, N. C., July, 1919.

Religious Education Association: Samuel A. Eliot, Boston, Mass.; Henry F. Cope, 1440 East 57th St., Chicago, Ill.; Detroit, Mich., March 17-19, 1919.

School Board Members' Association, 33 East 27th St., New York, N. Y.; Secretary, H. S. Chapin.

School Garden Association of America: J. H. Francis, Bureau of Education, Washington, D. C.; E. F. Murphy, Richmond, Ind.; Chicago, Ill., February 28, 1919, with the Department of Superintendence, National Education Association.

Society for the Promotion of Engineering Education: John F. Hayford, Cosmos Club, Washington, D. C.; F. L. Bishop, University of Pittsburgh, Pittsburgh, Pa.; June, 1919.

Society of Directors of Physical Education in Colleges: Joseph E. Raycroft, Princeton, N. J.; Paul C. Phillips, Amherst College, Amherst, Mass.; New York, N. Y., December, 1918.

Southern Association of College Women: Elizabeth A. Colton, Meredith College, Raleigh, N. C.; Mary L. Harkness, Newcomb College, New Orleans, La.; Columbus, Miss., April, 1919.

Southern Baptist Education Association: Rufus W. Weaver, Macon, Ga.; A. R. Bond, Nashville, Tenn.; Nashville, Tenn., January 23–24, 1919.

Southern Commission on Accredited Schools: W. H. Hand, University of South Carolina, Columbia, S. C.; Harry Clark, University of Tennessee, Knoxville, Tenn.

Southern Conference of Teachers of English: Maurice Fulton, Davidson, N. C.; James M. Grainger, Farmville, Va.

Southern Education Society: T. J. Woofter, Athens, Ga.; A. P. Bourland, 1707 Kilbourne Place, Washington, D. C.; Gainesville, Fla., December 30, 1918–January 1, 1919.

Southern Home Economics Association: Edith M. Thomas, State College, Tallahassee, Fla.; Ada M. Field, Peabody College, Nashville, Tenn.

Southern Industrial Education Association: C. C. Calhoun, Evans Building, Washington, D. C.; Mrs. A. S. Stone, 1228 Connecticut Ave., Washington, D. C.; Washington, D. C., October 28, 1918.

Universal Military Training League: Howard H. Gross, Chicago, Ill.; Mrs. H. K. Abbott, 336 West Marquette Road, Chicago, Ill.

University Commission on Southern Race Questions: James J. Doster, University of Alabama, University, Ala.; W. M. Hunley, Lexington, Va.

Vocational Education Association of the Middle West: Albert G. Bauersfeld, 1225 Sedgewick St., Chicago, Ill.; Leonard W. Waldstrom, 330 Webster Ave., Chicago, Ill.; Chicago, Ill., January, 16–18, 1919.

Western Association of College Teachers of Education: Herbert G. Lull, Emporia, Kans.; B. E. McProud, University Place, Nebr.; Kansas City, Mo., December 27–28, 1918.

Western Drawing and Manual Training Association: Ira S. Griffith, University of Missouri, Columbia, Mo.; L. R. Abbott, Grand Rapids, Mich.

Women's Educational and Industrial Union, 264 Boylston St., Boston, Mass.: Acting president, Caroline L. Humphrey; acting secretary, Elizabeth W. Schermerhorn; Boston, Mass., November 12, 1918.

Women's Intercollegiate Association for Student Government: Representative of Wilson College, Chambersburg, Pa.; Sarah C. Taylor, representative of Bryn Mawr College, Bryn Mawr, Pa.; Chambersburg, Pa., November, 1920.

Y. M. C. A. Educational Secretaries Association: A. L. Ward, 19 South La Salle St., Chicago, Ill.; R. R. Blackney, Y. M. C. A., Buffalo, N. Y.

2. *State.*

Alabama:

Alabama Educational Association: Cora Pearson, Florence; J. Alex Moore, Jasper.

Alabama History Teachers' Association: John B. Clark, Montgomery; D. G. Chase, 2205 15th Ave. N, Birmingham; probably April, 1919.

Alabama Home Economics Association: Sarah Bandy, Athens; Evelyn Herrington, Montevallo; Montevallo, January 29–30, 1919.

Alabama State Teachers' Association: G. W. Scott, Pratt City; P. C. Parks, Normal; Montgomery, April 17–19, 1919.

Alabama Sunday School Association: Lloyd M. Hooper, State Capitol, Montgomery; Leon C. Palmer, Montgomery; Mobile, April 8–10, 1919.

Association of Alabama Colleges: J. C. Dawson, Howard College, East Lake; James J. Doster, University of Alabama, University; April, 1919.

Association of English Teachers of Alabama: Janet Simpson, Florence; J. R. Rutland, Auburn; Spring, 1919.

Arizona:

Arizona State Teachers' Association: R. H. H. Blome, Bisbee; Elsie Toles, Tombstone.

Arkansas:

Arkansas School Directors' Association: Allen Winham, Texarkana; L. B. McClure, Russellville.

Arkansas State Teachers' Association: J. R. Jewell, University of Arkansas, Fayetteville; Annie Griffey, Little Rock; probably Little Rock, April 24–26, 1919.

California:

California Council of Education: E. Morris Cox, Oakland; Arthur H. Chamberlain, Monadnock Building, San Francisco; April 12, 1919.

California Federation of School Women's Clubs: Margaret Burke, 1496 Guerrero St., San Francisco; Elsie Northrup, San Mateo; San Francisco, November, 1918.

California High School Teachers' Association: P. M. Fisher, Oakland Technical High School, Oakland; Lulu Skelton, 526 66th St., Oakland; Oakland, February 11, 1919.

California History Teachers' Association: President, Roy Granger, Oakland; Christmas holidays, 1918.

California Music Teachers' Association: Albert F. Conant, San Diego; Grace Cox, 1621 Neale St., San Diego; San Francisco, July, 1919.

California State Association of English Teachers: Adeline Crovland, 655 Stockton St., San Francisco. Irene Furlong, 1590 Sacramento St., San Francisco; San Francisco, November, 1918.

California Teachers' Association, Bay Section: W. J. Cooper, Piedmont; W. L. Glascock, San Mateo; Oakland, April 14–18, 1919.

California Teachers' Association, Central Coast Section: E. E. Brownell, Gilroy; G. A. Bond, Santa Cruz; San Jose, November 26–27, 1918.

California Teachers' Association, Northern Section: H. G. Rawlins, Willows; Mrs. M. R. O'Neill, Sacramento; Sacramento, probably October 31, 1918.

California Teachers' Association, Southern Section: E. C. Moore, Los Angeles; A. E. Wilson, Los Angeles; Los Angeles, week of December 16, 1918.

Visual Education Association of California: C. H. Carson, High School, Pasadena; A. J. Misner, Lincoln High School, Los Angeles.

Vocational Guidance Society of California: Clarkson Dye, San Francisco; Carlotta P. Ebbets, 3407 Clay St., San Francisco.

Colorado:

Colorado Mathematical Society: Ira M. De Long, Boulder; Grace H. Shoe-Smith, 1130 York St., Denver; Denver, November, 1918.

Colorado Teachers' Association: J. A. Sexson, Sterling; H. B. Smith, 232 Century Building, Denver.

Connecticut:

Connecticut Arts Association: Edwin M. Roberts, Glenbrook; William L. Hagen, New Britain; New Haven, October, 1918.

Connecticut Business Educators' Association: Frank G. Meredith, Meriden; Frances E. Ives, New Haven High School, New Haven.

Connecticut Council of Education: Arthur T. Hadley, New Haven; Henry A. Tirrell, Norwich.

Connecticut Home Economics Association: Orissa M. Baxter, 57 Farmington Ave., Hartford; Myra Hunt, South Manchester; Hartford or New Haven, probably October, 1918.

Connecticut Schoolmasters' Club: Winthrop Buck, Wethersfield; Karl A. Reiche, Bristol; Hartford, February, 1919.

Connecticut State Supervisors' Association: William H. Bliss, Chestnut Hill; C. E. Wheeler, New London.

Connecticut State Teachers' Association: Clement C. Hyde, Hartford; S. P. Willard, Colchester; Hartford, New Haven, Norwalk, Norwich, October 25, 1918.

Connecticut State Teachers' League: Elizabeth J. Cairns, 19 Atwood St., Hartford; Sarah E. Clark, 20 Atwood St., Hartford; Hartford, New Haven, October 25, 1918.

Connecticut Superintendents' Association of Public Schools: S. J. Slawson, Bridgeport; E. J. Graham, Norwich; Bridgeport, February, 1919.

Connecticut Trade Educators' Association: F. J. Trinder, Capitol, Hartford; E. D. Packard, New Britain; Putnam, September 20, 1918.

District of Columbia:

Federal Schoolmen's Club: Louis D. Bliss, Bliss Electrical School, North Takoma Park, Md.; A. W. Miller, Central High School, Washington.

High School Teachers' Association: Miss M. H. Brewer, The Woodley, Washington; Dorothea F. Sherman, Western High School, Washington.

Principals' Association of the Graded White Schools; Adelaide Davis, Seward Apartment, Washington; Mary A. Dilger, 1211 Euclid St. NW., Washington.

School Club: G. D. Houston, 1758 T St. NW., Washington; H. G. Douglass, 318 A St. NE., Washington.

Florida:

Florida Educational Association: George W. Tedder, Madison; R. L. Turner, Inverness; Fort Myers, December 26–28, 1918.

Florida History Teachers' Association: Caroline M. Brevard, Tallahassee; Essie May Williams, 209 West Ashley St., Jacksonville; Gainesville, December 27–28, 1918.

Georgia:

Georgia County School Officials' Association: M. L. Brittain, Atlanta; M. L. Duggan, Atlanta.

Georgia Educational Association: Walter P. Thomas, West Point; Kyle T. Alfriend, Milledgeville; Macon, April, 1919.

Georgia State High School Association: Joseph S. Stewart, University of Georgia, Athens; W. P. Thomas, West Point; Athens, June, 1919.

Georgia State Teachers' Association: W. D. Thomas, Savannah; S. X. Floyd, Augusta; Augusta, November 29–30, 1918.

Idaho:

Idaho State Teachers' Association: O. O. Young, Boise; Ivy M. Wilson, 1509 State St., Boise; Boise, December 26–29, 1918.

Illinois:

Association of Primary Supervisors and Directors of City Training Schools: Edna Keith, Joliet.

Federation of Illinois Colleges: Walter D. Agnew, Abingdon; H. E. Griffith, Knox College, Galesburg; Eureka, April 28-29, 1919.

High School Conference, University of Illinois: Chairman of Conference Committee, Horace A. Hollister, University of Illinois, Urbana; Urbana, November 21–23, 1918.

Illinois Association of Teachers of English: A. F. Trams, Pontiac; E. C. Baldwin, University of Illinois, Urbana; Urbana, November 20, 1918.

Illinois City Superintendents' Association: G. P. Randall, Danville; I. M. Allen, Springfield; Decatur, November, 1918.

Illinois Manual Arts Association: A. G. Hill, Rock Island; F. O. Edwards, 600 Leland Annex, Springfield; Rock Island, February, 1919.

Illinois Montessori Association: Mrs. Walter E. Clark, 1220 East 57th St., Chicago; Dorothy Sears, Kenilworth.

Illinois State Music Teachers' Association: Harry R. Detweiler, Aurora; Herbert O. Merry, Lincoln; May, 1919.

Illinois State School Board Association: R. C. Augustine, 143 North Water St., Decatur; Mrs. G. A. Stover, 710 South Elmwood Ave., Oak Park; Decatur, November, 1918.

Illinois State Teachers' Association: George D. Wham, Carbondale; Robert C. Moore, Carlinville; Springfield, December 26–28, 1918.

Schoolmasters' Club of Illinois: W. P. Morgan, Macomb; Anthony Middleton, Peoria; October, 1918.

Indiana:

Association of Indiana Industrial Teachers: Paul Covert, Indianapolis; Hubert W. Roberts, Anderson.

Indiana Association of Psychology and Education: H. L. Smith, Bloomington; Flora Wilber, Fort Wayne; Indianapolis, November, 1918.

Indiana Association of Science and Mathematics Teachers: Edwin W. Morrison, Richmond; James E. Weyant, 336 North Audubon St., Indianapolis; October, 1919, with Indiana State Teachers' Association.

Indiana Association of Teachers of English: Mrs. R. M. Mikels, Indianapolis; Harriet McClellan, 621 Massachusetts Ave. NE., Washington, D. C.; Indianapolis, October 31, 1918.

Indiana City and Town Superintendents' Association: C. V. Haworth, Kokomo; C. P. Kellar, Brazil; Indianapolis, January 10–11, 1919.

Indiana City Superintendents' Research Club: C. V. Haworth, Kokomo; E. J. Llewelyn, Newcastle; Kokomo, January 2, 1919.

Indiana College Teachers of German: A. D. Charles, Richmond; M. D. Baumgartner, Butler College, Indianapolis; Atheneum, October, 1918.

Indiana History Teachers' Association: Beverley W. Bond, jr., Purdue University, Lafayette; D. H. Eilsenberry, Muncie.

Indiana Home Economics Association: Mary L. Matthews, Purdue University, Lafayette; Alma L. Garvin, Purdue University, Lafayette; Lafayette, January, 16, 1919.

Indiana Music Teachers' Association: R. G. McCutchan, DePauw University, Greencastle; Glenn M. Tindall, Kokomo; Kokomo, March or April, 1919.

Indiana—Continued.

Indiana State Teachers' Association: Horace Ellis, Indianapolis; Harriet McClellan, 621 Massachusetts Ave. NE., Washington, D. C.; October, 1919.

Indiana University, Conference on Educational Measurements (under direction of Bureau of Cooperative Research, Indiana University, Bloomington): Meeting, Bloomington, Ind., probably April 17–18, 1919.

Iowa:

Iowa Association of Mathematics Teachers: E. E. Watson, Parsons College, Fairfield; Ira S. Condit, Iowa State Teachers' College, Cedar Falls; Des Moines, November 1–3, 1918.

Iowa Association of Science Teachers: F. E. Goodell, University High School, Iowa City; Frances Church, East High School, Des Moines; Des Moines, October 31–November 1, 1918.

Iowa Association of Teachers of English: W. A. Brindley, Fort Dodge; Charles F. Pye, Des Moines; Des Moines, November 1, 1918.

Iowa College Presidents' Association: J. H. T. Main, Grinnell; J. H. Campbell, Simpson College, Indianola; Des Moines, September 16, 1918.

Iowa Home Economics Association: Vice-president, Mary Haight, Cedar Rapids; Genevieve Fisher, Iowa State College, Ames; Des Moines, November, 1918.

Iowa Society of Social Science Teachers: Charles M. Meyerholz, Teachers' College, Cedar Falls; Martha Hutchinson, 2912 University Ave., Des Moines; Des Moines, November 1–2, 1918.

Iowa State Federation of Teachers' Clubs: Jacob C. Grason, Council Bluffs; Gertrude G. Jenne, Davenport; Des Moines, November 8, 1918.

Iowa State Teachers' Association: M. G. Clark, Sioux City; Charles F. Pye, Des Moines; Des Moines, October 31–November 2, 1918.

Kansas:

Golden Belt Educational Association: S. L. Soper, Ellis.

Kansas Association of Mathematics Teachers: Secretary, J. A. G. Shirk, Pittsburg; probably February, 1919.

Kansas Association of Superintendents of Cities of First and Second Class: H. B. Wilson, Berkeley, Cal.; Charles A. Wagner, Iola; Topeka, September, 1918.

Kansas Association of Teachers of English: Carmie S. Wolfe, 1300 Garfield St., Topeka; Charlotte M. Leavitt, Washburn College, Topeka; Topeka, Salina, Wichita, Pittsburg, and Kansas City, November 7–8, 1918.

Kansas History Teachers' Association: Mary A. Whitney, State Normal School, Emporia; Marian Wood, Lawrence; Topeka, November, 1918.

Kansas Manual Arts Association: W. L. Friley, Independence; W. B. Miller, Lawrence; Topeka, Pittsburg, Wichita, and Salina, November 6–7, 1918.

Kansas State Domestic Science Association: President, Elizabeth Agurn, Hays Normal School, Hays.

Kansas State Kindergarten Association: Anne Bingham, Emporia; Ruth Scott, Enterprise; Topeka, November 7–9, 1918.

Kansas State Teachers' Association: J. O. Hall, Hutchinson; F. L. Pinet, Topeka; Topeka, Pittsburg, Wichita, and Salina, November 7–9, 1918.

Kentucky:

Association of Kentucky Colleges and Universities: F. L. McVey, Lexington; Frank L. Rainey, Danville; Lexington, December 7, 1918.

Kentucky Educational Association: Orville Stivers, Louisville; R. E. Williams, Louisville; Louisville, April, 1919.

Kentucky Home Economics Association: Bertha H. Tarrant, 618 Floral Terrace, Louisville; Elsie Speck, Paducah.

Kentucky Music Teachers' Association: Anna C. Goff, Lexington; Flora M. Bertelle, 734 Fourth Ave., Louisville; Louisville.

Louisiana:

Louisiana Conference of Parish School Board Members and Superintendents: T. H. Harris, Baton Rouge; J. H. Bres, Port Allen.

Louisiana Council of Education: A. B. Dinwiddie, Station 20, New Orleans; G. C. Huckaby, Baton Rouge.

Louisiana State Association of English Teachers: A. G. Reed, Baton Rouge; Mary M. Elmore, Alexandria; New Orleans, April, 1919.

Louisiana Teachers' Association: A. J. Caldwell, Shreveport; L. J. Alleman, Lafayette; New Orleans, April, 1919.

Maine:

Maine Council of Teachers of English: William H. Coleman, Lewiston; Edna M. Cornforth, Auburn; Portland, October, 1918.

Maine Teachers' Association: Bertram E. Packard, Camden; Glenn W. Starkey, Augusta.

Maryland:

Maryland Council of Teachers of English: W. H. Wilcox, 6235 York Road, Baltimore; Andrew H. Krug, Baltimore City College, Baltimore; Baltimore, Thanksgiving week, 1918.

Maryland High School Teachers' Association: Charles G. Myers, Rockville; John L. Sigmund, Frederick; Baltimore.

Maryland History Teachers' Association: J. H. Latané, Johns Hopkins University, Baltimore; Laura J. Cairnes, 1216 West Fayette St., Baltimore.

Maryland State Teachers' Association: Nicholas Orem, Easton; Hugh W. Caldwell, Chesapeake City; Baltimore, November 29–30, 1918.

Massachusetts:

Association of Principals and Teachers of Massachusetts State Normal Schools: President, John G. Thompson, Fitchburg; Miss M. H. Bishop, 28 Windsor St., Worcester.

Harvard Teachers' Association: William B. Snow, English High School, Boston; Henry W. Holmes, Harvard University, Cambridge; Cambridge, March, 1919.

High School Masters' Club of Massachusetts: Charles T. Woodbury, Fitchburg; John W. Hutchins, High School, Malden; Boston, March, 1919.

Massachusetts Association of School Superintendents: Clarence H. Dempsey, Haverhill; Frank C. Johnson, Ayer; probably Boston, fall, 1918.

Massachusetts Public School Janitors' Association: Charles H. Evers, Worcester; Wallace C. Tilton, New Bedford; Springfield, July, 1919.

Massachusetts Schoolmasters' Club: Payson Smith, State House, Boston; Leonard M. Patton, Milton; Boston, probably October 19, 1918.

Massachusetts Teachers' Association: J. F. McDuffee, Springfield; B. C. Merry, Needham; Boston, October, 1918.

Massachusetts Teachers' Federation: Henry H. Harris, Lowell; Ernst Makechnie, West Somerville; Cambridge, October 19, 1918.

Tufts College Teachers' Association: Charles W. Parmenter, Cambridge; Edwin A. Shaw, West Somerville; Tufts College, October, 1918.

Michigan:
Michigan Association of School Superintendents and School Board Members: J. W. Sexton, Lansing; H. C. Daley, 131 Elmhurst Ave., Detroit: Ann Arbor, Spring, 1919.
Michigan Home Economics Association: Georgia L. White, East Lansing; Alice Cimmer, Battle Creek; Detroit, October 30-November 1, 1918.
Michigan Industrial Arts and Science Association: Albert Holms, Kalamazoo; Walter Wheater, Kalamazoo; Kalamazoo, October, 1918.
Michigan Schoolmasters' Club: E. O. Marsh, Jackson; Louis P. Jocelyn, 545 South Division St., Ann Arbor; Ann Arbor, March, 1919.
Michigan State Federation of Teachers' Clubs: Edwin L. Miller, Detroit; Lila M. Fyan, Northeastern High School, Detroit; Detroit, October 31-November 1, 1918.
Michigan State Teachers' Association: H. H. Lowry, Ionia; John P. Everett, 903 West South St., Kalamazoo; Detroit, October 31-November 1, 1918.
Upper Peninsula Educational Association: H. D. Lee, Hancock; Gilbert L. Brown, Marquette; Marquette, October 9-11, 1918.

Minnesota:
Minnesota Educational Association: E. A. Freeman, Grand Rapids; W. H. Shephard, North High School, Minneapolis.
Minnesota Educational Association of School Board Members: Mrs. H. Witherstine, Rochester; W. J. Rashleigh, Aurora; St. Paul or Minneapolis, 1918.
Minnesota Home Economics Association: Leila Gerry, 2119 Russell Ave., Minneapolis; Lucy E. Von Rohr, Hotel Hastings, Minneapolis.
Minnesota Music Teachers' Association: G. H. Fairclough, 802 Pittsburgh Building, St. Paul; John A. Jaeger, 1648 Blair St., St. Paul; June 24-26, 1919.
Scandinavian Language Teachers' Association of Twin Cities: Victor L. Erickson, 3328 16th Ave., South, Minneapolis; Inga Bredesen, 307 West 15th St., Minneapolis; September 28, 1918.

Mississippi:
Mississippi Classical Association: Lucile Scott, Yazoo City; Clara Stokes, Gloster; Jackson, April 26, 1919.
Mississippi Teachers' Association: H. B. Heidelberg, Clarksdale; H. L. McCleskey, Hattiesburg; May, 1919.

Missouri:
Missouri College Union: A. Ross Hill, Columbia; T. Berry Smith, Fayette; Columbia, November 5-6, 1918.
Missouri Negro Teachers' Association: R. H. Cole, 4210 West Belle Place, St. Louis; C. G. Williams, Boonville; St. Louis, November 7-9, 1918.
Missouri Society of Teachers of English: V. C. Coulter, Warrensburg; Dorothy Kaucher, Central High School, St. Joseph; St. Louis, November 8, 1918.
Missouri Society of Teachers of History and Government: W. S. Harmon, Westport High School, Kansas City; J. E. Wrench, 1104 Hudson Ave., Columbia; St. Louis, November, 1918.
Missouri Society of Teachers of Mathematics and Science: O. M. Stewart, Columbia; B. F. Finkel, Springfield; St. Louis, November 7-9, 1918.
Missouri State Teachers' Association: Miss T. C. Gecks, Board of Education, St. Louis; E. M. Carter, Columbia; St. Louis, November 7-9, 1918.

Montana:
Montana State Council of English Teachers: B. E. Millikin, Butte; F. J. Parkin, Bozeman.
Montana State Teachers' Association: J. E. Monroe, Dillon; H. H. Swain, Helena; Helena, November 25-27, 1918.

Nebraska:
Nebraska History Teachers' Association: J. G. W. Lewis, Wayne; Clark E. Persinger, Table Rock; Omaha, November 6-7, 1918.
Nebraska Home Economics Association: Mrs. H. G. Gramlich, Lincoln; Maud Wilson, University Farm, Lincoln; Lincoln, January, 1919.
Nebraska Schoolmasters' Club: J. F. Beveridge, Omaha; H. E. Bradford, State Farm School, Lincoln; Lincoln, October, 1918.
Nebraska State Teachers' Association: F. M. Gregg, Peru; H. O. Sutton, Kearney; Omaha, December 26-28, 1918.
Nebraska Woman's Education Association: Etta Smith, 6118 Florence Blvd., Omaha; Omaha, Margaret Delpsch, Comenius School, Omaha; November, 1918.

Nevada:
Nevada State Educational Association: B. D. Billinghurst, Reno; Maude Frazier, Goldfield; Reno, December, 1918.

New Hampshire:
New Hampshire Practical Arts Club: L. E. Ryder, Manchester; Josephine Emery, Laconia; with New Hampshire State Teachers' Association.
New Hampshire State Kindergarten Association: Mabel Currier, Portsmouth; Helen Gibbs, Concord; Concord, October, 1918.
New Hampshire State Teachers' Association: F. V. Landman, Wolfeboro; Inez Vaughan, Keene; Concord, October 18, 1918.

New Jersey:
Alliance of New Jersey Women Teachers: Elizabeth A. Allen, 70 Hudson St., Hoboken; Mrs. Caroline B. Lowe, 171 Jefferson St., Passaic.
Association of Teachers of English of New Jersey: Charles G. Osgood, Princeton; L. E. French, High School, Atlantic City; November 16, 1918.
Council of Education of the State of New Jersey: Don C. Bliss, Montclair; J. Howard Hulsart, Dover; probably Newark, October 25-26, 1918.
New Jersey Science Teachers' Association: Earl Eastman, High School, Atlantic City; Carl J. Hunkins, South Side High School, Newark; probably October, 1918.
New Jersey State Teachers' Association: Henry M. Cressman, Egg Harbor City; H. J. Neal, Phillipsburg; Atlantic City, December 26-28, 1918.
Vocational Arts Association of New Jersey: Hugo B. Froehlich, Newark; James E. Gaffney, Atlantic City.

New Mexico:
New Mexico Association for Science: John D. Clark, Albuquerque; L. A. Higley, State College; Albuquerque, November 25-27, 1918.
New Mexico Educational Association: Isabel Lancaster Eckles, Silver City; John Milne, Albuquerque; Albuquerque, November 23-27, 1918.

New York:
Agricultural Teachers and Principals' Association: H. B. Allen, Westfield; Garland A. Bricker, Syracuse University, Syracuse; Syracuse, December 26-27, 1918.
Associated Academic Principals: Harry W. Rockwell, Pelham Manor; Edward P. Smith, North Tonawanda; *Syracuse, December 26-28, 1918.*

New York—Continued.

Association of Colleges in the State of New York: Boothe C. Davis, Alfred; Augustus S. Downing, Education Building, Albany; Albany.

New York State Association of District Superintendents: George H. Covey, Katonah; Cora V. Luttenton, Albion; Schenectady, November, 1918.

New York State Association of English Teachers: A. B. Sias, Rochester; Edwin B. Richards, Central High School, Syracuse; Albany, November 27–28, 1918.

New York State Council of City School Superintendents: S. R. Shear, Poughkeepsie; George M. Elmendorf, Herkimer; Binghamton, October, 1918.

New York State Council of Elementary School Principals and Teachers: Nathaniel G. West, Rochester; Mary L. Ludwig, 502 Hickory Street, Buffalo; Albany, November 25–27, 1918.

New York State History Teachers' Association: Edward P. Smith, North Tonawanda; Clarence L. Hewitt, Central High School, Syracuse; Albany, November 26, 1917.

New York State Modern Language Association: J. B. E. Jonas, DeWitt Clinton High School, New York City; Arthur G. Host, Troy High School, Troy; Albany, November 26–27, 1918.

New York State School Hygiene Association: Lawrence S. Hill, 815 Myrtle Ave., Albany; Edith Walker, Board of Education, Albany; Binghamton, November 25–27, 1918.

New York State Science Teachers' Association: Harry A. Carpenter, Chevy Chase, D. C.; Edward E. Ford, West High School, Rochester; Albany, November 25–27, 1918.

New York State Teachers' Association: H. S. Weet, Rochester; Richard A. Searing, North Tonawanda; Albany, November 25–27, 1918.

North Carolina:

Modern Language Association of North Carolina: Hinda Hill, State Normal College, Greensboro; Annie Beam, Shelby; Raleigh, November 28, 1918.

North Carolina Association of City Superintendents: Harry Harding, Charlotte; Hoy Taylor, Greenville; Raleigh, November, 1918.

North Carolina Association of Geography Teachers: President, Collier Cobb, Chapel Hill.

North Carolina Sunday School Association: G. T. Stephenson, Winston-Salem; J. Walter Long, Greensboro; Greensboro, November, 1918.

North Carolina Teachers' Assembly: N. W. Walker, Chapel Hill; E. E. Sams, Raleigh.

North Dakota:

City Superintendents' Association of North Dakota: P. S. Berg, Dickinson; Nelson Sauvain, Devils Lake; Minot, November 4–5, 1918.

North Dakota Association of English Teachers: Julia McDonough, Minot; Hilda Taylor, Jamestown; Minot, October, 1918, with the North Dakota Educational Association.

North Dakota Council of Geography Teachers: Jesse E. Switzer, Valley City; Huldah L. Winsted, State Normal School, Minot; Minot, November, 1918.

North Dakota Educational Association: R. M. Black, Ellendale; W. E. Parsons, Bismarck; Minot, November 6–8, 1918.

Ohio:

Association of Ohio Teachers of Mathematics and Science: J. D. Boldt, Dayton; H. M. Beatty, High School, Newark; Columbus, April, 1919.

Conference of Ohio College Presidents and Deans: Parke R. Kolbe, Akron; Mary I. Park, Heidelberg University, Tiffin.

Ohio Association of English Teachers: C. E. Thomas, 1924 Delaware Avenue, Norwood; Ethel M. Parmenter, East Technical High School, Cleveland; Columbus, Christmas holidays, 1918.

Ohio College Association: C. W. Chamberlain, Denison University, Granville; T. B. Birch, Wittenberg College, Springfield; Columbus, April 18–19, 1919.

Ohio History Teachers' Association: Kenneth S. Latourette, Granville; Carl Wittke, Ohio State University, Columbus.

Ohio Home Economics Teachers' Association: Mary Parker, Cleveland; Mary Tough, Ohio University, Athens; Columbus, November, 1918.

Ohio Industrial Arts Teachers' Association: J. W. Moyer, Sandusky; Roy Jenkins, Wapakoneta; Columbus, December 25, 1918–January 1, 1919.

Ohio School Improvement Federation: F. A. Derthick, Mantua; W. N. Beetham, Wellsburg, W. Va.; Columbus, Christmas holidays, 1918.

Ohio Society of College and University Teachers of Education: Edward A. Miller, Oberlin College, Oberlin; Arthur R. Mead, Ohio Wesleyan University, Delaware; Columbus, Easter, 1919.

Ohio State Association of School Board Members: R. G. Ingleson, Avon Lake; W. J. Knight, Urbana; Columbus, February, 1919.

Ohio State Teachers' Association: A. C. Eldredge, Cleveland; F. E. Reynolds, Wapakoneta; Columbus, December 26–28, 1918.

Oklahoma:

Oklahoma Council of Teachers of English: F. C. Oakes, Edmond; Nellie J. McFerron, Ardmore; Oklahoma City, November 28, 1918.

Oklahoma Educational Association: B. F. Nihart, Oklahoma City; Mary D. Couch, Oklahoma City; Oklahoma City, November 28–30, 1918.

Oklahoma History Teachers' Association: E. E. Dale, Norman; C. W. Turner, Oklahoma City; Oklahoma City, November 27–30, 1918.

Oklahoma Home Economics Association: Miss Kimball, Tulsa; Harriet Hopkins, Norman; Oklahoma City, November 29–30, 1918.

Oregon:

Oregon Council of Teachers of English: Mary H. Perkins, University of Oregon, Eugene; Rosa B. Parrott, Oregon Normal School, Monmouth; Portland, December 27–28, 1918.

Oregon Science and Mathematics Teachers' Association: F. L. Griffin, Portland; E. L. Kee el, University of Oregon, Eugene; Portland, December 26–28, 1918.

Oregon State Teachers' Association: H. D. Sheldon, Eugene; E. D. Ressler, Corvallis; Portland, December 30, 1918–January 1, 1919.

Pennsylvania:

Association of School Board Secretaries of Pennsylvania: W. T. Norton, McKeesport; C. M. Piper, Altoona; Harrisburg, February 5, 1919.

Pennsylvania Schoolmasters' Club: H. W. Golden, Pittsburgh; Charles W. Shaffer, Wilmerding; Pittsburgh.

Pennsylvania State Educational Association: S. E. Weber, Scranton; J. P. McCaskey, Lancaster; Harrisburg, December 29, 1918–January 1, 1919.

Pennsylvania State School Directors' Association: W. G. Davis, McKeesport; D. D. Hammelbaugh, 121–123 Chestnut St., Harrisburg; Harrisburg, February 6–7, 1919.

Public Education and Child Labor Association of Pennsylvania, 1015 Witherspoon Building, Philadelphia: Franklin N. Brewer; B. M. Watson.

Rhode Island:
- Rhode Island History Teachers' Association: John C. Swift, Providence; A. Howard Williamson, 5 Judkins St., Rumford; Providence, probably October 19, 1918.
- Rhode Island Institute of Instruction: John L. Alger, Providence; M. Davitt Carroll, 76 Beaufort St., Providence; Spring, 1919.

South Carolina:
- Association of Colleges of South Carolina: H. N. Snyder, Wofford College, Spartanburg; L. T. Baker, University of South Carolina, Columbia; Columbia, March, 1919.
- South Carolina Association of Elementary Schools: Lottie Olney, Charleston; Mrs. John Hargrave, Dillon.
- South Carolina Home Economics Association: Mary B. McGowan, Commercial Club, Nashville, Tenn.; Lois C. Erwin, Spartanburg.
- South Carolina School Improvement Association: Madeleine Spigener, Columbia; Mary Eva Hite, Batesburg; Columbia, probably April 15, 1919.
- South Carolina State Colored Teachers' Association: R. S. Wilkinson, Orangeburg; I. M. A. Myers, Manning; Orangeburg, July, 1919.
- South Carolina State Teachers' Association: J. P. Kinard, Rock Hill; R. C. Burts, Rock Hill; March, 1919.

South Dakota:
- South Dakota Commercial Teachers' Association: P. A. Cooley, Mitchell; Etha Burnham, Aberdeen; Mitchell, November 25–27, 1918.
- South Dakota Educational Association: Harry M. Gage, Huron; A. H. Seymour, Aberdeen; Mitchell, November 25–27, 1918.
- South Dakota History Teacher's Association: Bruce McVay, De Smet; Edwin Ott, 812 South Prairie Ave., Sioux Falls; Mitchell, November 27–29, 1918.

Tennessee:
- Tennessee History Teachers' Association: A. Max Souby, Murfreesboro; Mabel Jones, 1713 Hayes St., Nashville.
- Tennessee State Public School Officers' Association: J. M. Hatfield, Cookeville; Claude J. Bell, Nashville; Nashville, January 14–16, 1919.
- Tennessee State Teachers' Association: R. L. Jones, Murfreesboro; Perry L. Harned, Clarksville.

Texas:
- Conference for Education in Texas: President, Pat M. Neff, Waco; Ft. Worth, November, 1918.
- Home Economics Association of Texas: Grace Berry Smith, San Marcos; Miss Palmer R. Ellsberry, Dallas; Dallas, November, 1918.
- Texas State Teachers' Association: W. B. Bizzell, College Station; R. T. Ellis, 2988 Lipscomb St., Fort Worth; Dallas, November 28–30, 1918.
- Texas State Teachers' Association (colored): C. F. Carr, Palestine; T. K. Price, Mexia; Palestine, November 28–30, 1918.

Utah:
- Utah Educational Association: John A. Widtsoe, University of Utah, Salt Lake City; J. Challen Smith, 968 Lake St., Salt Lake City; Salt Lake City, January 1–3, 1919.
- Utah Home Economics Association: Alice Ravenhill, Logan; Hortense White, Logan; Salt Lake City.

Vermont:
- Vermont Schoolmasters' Club: President, S. C. Hutchinson, Montpelier.
- Vermont State Teachers' Association: Margaret Kelley, Derby; Florence Wellman, Brattleboro; Montpelier, November 6–8, 1918.
- Vermont Women Teachers' Club: Elizabeth Isham, Burlington; Ella Ferrin, Castleton; Montpelier, October, 1918.

Virginia:
- Association of Virginia Colleges: J. A. Morehead, Salem; Charles G. Maphis, University; Richmond, February, 1919.
- Cooperative Education Association of Virginia: Mrs. B. B. Munford, 503 East Grace St., Richmond; J. H. Montgomery, Davis Building, Richmond; Richmond, November, 1918.
- Public School Trustees Association of Virginia: F. T. Briggs, Portsmouth; M. F. McGehee, Keysville; Richmond, November, 1918.
- State Educational Conference: J. A. C. Hurt, Wytheville; H. S. Hooke, Roanoke; Radford, March, 1919.
- Virginia Association of Colleges and Schools for Girls: Mrs. May Willis, Chatham; Mary S. Gammon, 1110 Capitol St., Richmond; Richmond.
- Virginia English Teachers' Association: R. E. Blackwell, Ashland; James M. Grainger, State Normal School, Farmville; Richmond, November 28–30, 1918.
- Virginia Society for the Study of Education: J. P. McConnell, East Radford; R. T. Kerlin, Lexington; Richmond, November 27–28, 1918.
- Virginia State Primary Teachers' Association: Blanche Bulifant, East Radford; Julia Ingles, Radford; Richmond, about November 30, 1918.
- Virginia State Teachers' Association: J. A. C. Chandler, Richmond; W. C. Blakey, Richmond; Richmond, Thanksgiving week, 1918.

Washington:
- Puget Sound English Masters' Club: G. W. Saunderson, Lincoln High School, Seattle; E. H. Butler, Washington School, Tacoma; probably Tacoma, November, 1918.
- Puget Sound Schoolmasters' Club: W. Q. Osborn, Tacoma; Frank Farrar, 6725 24th Ave., N. W., Seattle; Tacoma, probably November 16, 1918.
- Washington Educational Association: Almina George, Seattle; O. C. Whitney, 818 North Adams St., Tacoma.
- Washington State Home Economics Association: Anna Post, Tacoma; Agnes Allen, Tacoma.

West Virginia:
- Vocational Teachers' Association of West Virginia: W. G. Carpenter, Wheeling; W. W. Keylor, Wheeling; Wheeling, November 27–30, 1918.
- West Virginia Council of Teachers of English: Walter Barnes, Fairmont; Mary M. Atkeson, Morgantown; October, 1918.
- West Virginia Education Association: Waitman Barbe, Morgantown; H. W. McDowell, Moundsville; Wheeling, November 27–29, 1918.
- West Virginia History Teachers' Association: J. H. Thornton, Charleston; Dora L. Newman, Fairmont; Wheeling, Thanksgiving week, 1918.
- West Virginia Home Economics and Manual Arts Association: Rachel H. Colwell, West Virginia University, Morgantown; Nellie Woods, Shepherd College, Shepherdstown.
- West Virginia State Teachers' Association: A. W. Curtis, Institute; C. Ruth Campbell, Institute; Huntington, November 28–29, 1918.

Wisconsin:

Wisconsin Agricultural Education Association: John James, Madison; Warren W. Clark, River Falls; Madison.

Wisconsin Association of Mathematics Teachers: I. N. Warner, Platteville; Walter W. Hart, University of Wisconsin, Madison; Milwaukee.

Wisconsin Association of Modern Foreign Language Teachers: Barry Cerf, Madison; J. D. Deihl, 2137 Keyes Ave., Madison.

Wisconsin Association of Vocational School Directors: E. E. Gunn, jr., Green Bay; A. R. Graham, Racine; Milwaukee, November 2–3, 1918.

Wisconsin History Teachers' Association: William H. Cheever, Milwaukee Normal School, Milwaukee; Amelia C. Ford, Milwaukee-Downer College, Milwaukee; Milwaukee, November 7–8, 1918.

Wisconsin Music Teachers' Association: Charles H. Mills, University of Wisconsin, Madison; Ella Fink, Milwaukee; Madison, May, 1919.

Wisconsin Physical Education Society: Walter Wittich, La Crosse; Robert Nohr, La Crosse Normal School, La Crosse; Milwaukee, November 7–9, 1918.

Wisconsin Superintendents' and Supervising Principals' Association: P. J. Zimmers, Manitowoc; F. P. Young, Appleton; Madison, October 4–5, 1918.

Wisconsin Teachers' Association: M. N. McIver, Oshkosh; M. A. Bussewitz, 435 Kenwood Boulevard, Milwaukee; Milwaukee, November 7–9, 1918.

Wyoming:

Wyoming State Teachers' Association: Joseph E. Burch, Kemmerer; Mrs. Nellie L. Wales, Thermopolis; Lander, probably Thanksgiving week, 1918.

3. *City.*

Association of Women Principals of Public Schools of New York City: Jessie B. Colburn, 8 West 103d St.; Loretto M. Rochester, 845 Lexington Ave.; September 30, 1918.

Boston Principals' Association: Charles W. Parmenter, Cambridge; Joshua Q. Litchfield, Brookline.

Boston Teachers' Club: Cora E. Bigelow, 36 Hancock St.; Caroline E. Nutter, 125 Lexington St., East Boston.

Brooklyn Teachers' Association: Isabelle A. Ennis, Public School 27; Mary E. Hamilton, Public School 27.

Chicago Principals' Club: Chester C. Dodge, 5 South Wabash Ave.; James E. McDade, 5 South Wabash Ave.; September 21, 1918.

Chicago Teachers' Federation: Ida L. M. Fursman, 4465 North Kildare Ave.; Frances E. Harden, 1543 Sherwin Ave.; September 14, 1918.

Cincinnati Schoolmasters' Club: Walter Peoples, 4631 Glenshade Ave.; M. R. McElroy, 6100 Prentice St.; September 14, 1918.

Denver Teachers' Club: Alwyn C. Smith, 1130 York St.; Edith Weymouth, Hotel West.

Detroit Teachers' Association: Rachel McKinney, 138 Stanton Ave.; Alice V. Guysi, 50 Broadway; September 30, 1918.

Educational Society of Baltimore: Edward F. Buchner, Johns Hopkins University; Andrew J. Krug, Baltimore City College; October 9, 1918.

Elementary Teachers' Association (Baltimore): Laura W. Manister, 600 18th St.; Nellie H. Cromwell, 430 North Carey St.; October 7, 1918.

Federation of Teachers' Associations of the City of New York: John W. Rafferty, 1192 Pacific St., Brooklyn; Olive M. Jones, Public School 120.

High School Teachers' Association of New York City: Clyde Jefford, Boys' High School, Brooklyn; Bertha R. Courtney, Long Island City.

Interborough Association of Women Teachers (New York City): Grace C. Strachan-Forsythe, 1710 Avenue I, Brooklyn; Lillian I. Powers, 56 Macon St., Brooklyn; October, 1918.

Los Angeles City Teachers' Club: Wilhelmina Van de Goorberg, 202 Trinity Bldg.; Zoe McClure, 4937 Lynn St.

Los Angeles High School Teachers' Association: C. A. Wheeler; A. E. Couch.

Louisville (Ky.) Educational Association: E. P. Chapin, Boys' High School; Elise Weibel, Emerson School.

New Haven Teachers' League: Carolyn Merchant, 145 Lenox St.; Helen L. Gilbert, West Haven; September 23, 1918.

New York Academy of Public Education: William L. Felter, Girls' High School, Brooklyn; Samuel B. Heckman, College of the City of New York; November, 1918.

New York City Association of Teachers of English: Dudley H. Miles, Evander Childs High School; William P. Wharton, High School of Commerce.

New York Montessori Association: Raymond P. Holden, 323 Riverside Drive; Ralph Albertson, 16 Horatio St.

New York Schoolmasters' Club: Edward W. Stitt, 500 Park Ave.; Matthew D. Quinn, 101 East 92d St.; October 12, 1918.

New York Society for the Experimental Study of Education: William E. Grady, Brooklyn; J. Carleton Bell, Brooklyn Training School for Teachers, Brooklyn.

Oakland Teachers' Association: Philip M. Fisher, 431 Orange St.; Lulu A. Shelton, 549 62d St.

Philadelphia Teachers' Association: J. Eugene Baker, 13th and Spring Garden St.; Emily M. Renshaw, 2321 Wharton St.; September 16, 1918.

Pittsburgh Teachers' Association: Clara F. McMillen, 317 South Atlantic Ave.; Ida Gealey, 721 Whitney Ave., Wilkinsburg, Pa.; September 10, 1918.

Portland (Oreg.) Grade Teachers' Association: Harriet Thayer, 201 14th St.; Louise Kelly, 733 Washington St.; September 19, 1918.

Public Education Association of Buffalo: Henry G. Breed, jr., 111 Swan St.; William P. Haines, White Bldg.

Public Education Association of Chicago: Allen B. Pond, 64 East Van Buren St.; Glen Edwards, 5486 Blackstone Ave.; May, 1919.

Public Education Association of Philadelphia: Franklin N. Brewer, The Wanamaker Store; Jane R. Harper, acting, 1015 Witherspoon Building.

Public Education Association of the City of New York: Charles P. Howland, 8 West 40th St.; Howard W. Nudd, 8 West 40th St.

Public School Teachers' Association of Baltimore: Charles J. Koch, Madison and Lafayette Ave.; Minnie Daugherty, 637 West North Ave.; October 14, 1918.

Public School Teachers' Association of Providence, R. I.: Frank A. Spratt, 276 Washington Ave.; Mary C. Dunn, 127 Vinton St.

Richmond Teachers' League: Bessie P. Taylor; W. H. Magee, 714 Noble Ave.; October 25, 1918.

San Francisco Grade Teachers' Association: Edna Cotrel, 3240 Clay St.; Kathryn Cooney, 1350 Washington St., December, 1918.

Schoolmasters' Association of New York and Vicinity: Eugene C. Alder, Adelphi Academy, Brooklyn; Frank S. Hackett, Riverdale-on-Hudson, New York City; New York City, October 18, 1918.

Schoolmen's Club of Philadelphia: Alfred V. Sayre, Southwark School; Walter G. McMullin, 1028 Filmore St.

Teachers' Council (New York City): William J. McAuliffe, 2683 Briggs Ave.; Agnes M. Marshall, 541 Eastern Parkway, Brooklyn; September 20, 1918.

Utica (New York) Teachers' Association: Bessie J. Rendell, 1517 Sunset Ave.; Luella J. Thomas, 423 Court St.; September, 1918.

XXXIX.—Learned and Civic Organizations.

The following list shows, first, the name of the organization; second, the name and address of the president; third, the name and address of the secretary; fourth, the place and date of the next meeting.

American Academy of Arts and Letters: William D. Howells, 347 Madison Ave., New York, N. Y.; Robert U. Johnson, 347 Madison Ave., New York, N. Y.; New York, N. Y., November 20, 1918.

American Academy of Medicine: J. E. Tuckerman, 733 Osborne Building, Cleveland, Ohio; Thomas Wray Grayson, 52 North Fourth St., Easton, Pa.; Atlantic City, N. J., June 9-10, 1919.

American Academy of Political and Social Science: Leo S. Rowe, University of Pennsylvania, Philadelphia, Pa.; J. P. Lichtenberger, 4024 Spruce St., Philadelphia, Pa.; Philadelphia, Pa., April, 1919.

American Association for Labor Legislation: Samuel McCune Lindsay, Columbia University, New York, N. Y.; John B. Andrews, 131 East 23d St., New York, N. Y.; Cleveland, Ohio, December 26-28, 1918.

American Association for the Advancement of Science: John Merle Coulter, University of Chicago, Chicago, Ill.; L. O. Howard, Smithsonian Institution, Washington, D. C.; Baltimore, Md., December 27-31, 1918.

American Association for the Study and Prevention of Infant Mortality: Mrs William L. Putnam, 49 Beacon St., Boston, Mass.; Gertrude B Knipp, 1211 Cathedral St., Baltimore, Md.; Asheville, N. C., November 11-14, 1918.

American Association of Museums: Vice-president, W. P. Wilson, Commercial Museum, Philadelphia, Pa.; Harold L. Madison, Park Museum, Providence, R. I.; about May 20, 1919.

American Chemical Society: William H. Nichols, 25 Broad St., New York, N. Y.; Charles L. Parsons, Box 505, Washington, D. C.; Cleveland, Ohio, September 10-13, 1918.

American Civic Association: J. Horace McFarland, Harrisburg, Pa.; E. E. Marshall, acting, 914 Union Trust Building, Washington, D. C.

American Economic Association: Irving Fisher, New Haven, Conn.; Allyn A. Young, Cornell University, Ithaca, N. Y.; Cleveland, Ohio, December 28-31, 1918.

American Forestry Association: Charles L. Pack, Lakewood, N. J.; Percival S. Ridsdale, 1410 H St., N. W., Washington, D. C.

American Genetic Association: David Fairchild, Bureau of Plant Industry, U. S. Department of Agriculture, Washington, D. C.; George M. Rommel, Bureau of Animal Industry, U. S. Department of Agriculture, Washington, D. C.

American Geographical Society: John Greenough, Broadway and 156th St., New York, N. Y.; Isaiah Bowman, Broadway and 156th St., New York, N. Y.; New York, N. Y., November 21, 1918.

American Historical Association: William R. Thayer, Cambridge, Mass.; W. G. Leland, 1140 Woodward Building, Washington, D. C.; Cleveland, Ohio, probably December 30-31, 1918.

American Institute of Social Service: Mornay Williams, Englewood, N. J.; Rudolph M. Binder, New York University, New York, N. Y.; New York, N. Y., October 15, 1918.

American Library Association: W. W. Bishop, University of Michigan, Ann Arbor, Mich.; George B. Utley, 78 East Washington St., Chicago, Ill.

American Mathematical Society: L. E. Dickson, 5535 University Ave., Chicago, Ill.; F. N. Cole, Columbia University, New York, N. Y.; Hanover, N. H., September 4-6, 1918.

American Medical Association: Arthur D. Bevan, 122 South Michigan Blvd., Chicago, Ill.; Alexander R. Craig, 535 North Dearborn St., Chicago, Ill.; Atlantic City, N. J., probably June, 1919.

American Philological Association: Frank F. Abbott, Princeton University, Princeton, N. J.; Clarence C. Bill, Western Reserve University, Cleveland, Ohio: New York, N. Y., December 26-28, 1918.

American Philosophical Association: Mary W. Calkins, Wellesley College, Mass.; H. O. Overstreet, College of the City of New York, New York, N. Y.; December, 1918.

American Philosophical Society: William B. Scott, Princeton, N. J.; I. Minis Hays, 104 South 5th St., Philadelphia, Pa.; Philadelphia, Pa., April, 1919.

American Political Science Association: Henry J. Ford, Princeton University, Princeton, N. J.; Chester Lloyd Jones, University of Wisconsin, Madison, Wis.; Cleveland, Ohio, December 26-28, 1918.

American Psychological Association: J. W. Baird, Worcester, Mass.; H. S. Langfeld, Harvard University, Cambridge, Mass.

American Public Health Association: Charles J. Hastings, Municipal Building, Toronto, Canada; A. W. Hedrick, 126 Massachusetts Ave., Boston, Mass.; Chicago, Ill., October 14-17, 1918.

American Social Hygiene Association: William H. Welch, Baltimore, Md.; Donald R. Hooker, Roland Park, Md.; probably Washington, D. C., October, 1918.

American Social Science Association: George G. Battle, 37 Wall St., New York, N. Y.; James B. Townsend, 15 East 40th St., New York, N. Y.; New York, N. Y., January 19, 1919.

American Society for Thrift: S. W. Straus, 150 Broadway, New York, N. Y.; Henry R. Daniel, 220 West 42d St., New York, N. Y.

American Sociological Society: Charles H. Cooley, University of Michigan, Ann Arbor, Mich.; Scott E. W. Bedford, University of Chicago, Chicago, Ill.; Richmond, Va., December 27-28; 1918.

American Statistical Association: Wesley C. Mitchell, 15 North Washington Square, New York, N. Y.; Robert E. Chaddock, Columbia University, New York, N. Y.; Cleveland, Ohio, December, 1918.

Association of American Geographers: Nevin M. Fenneman, University of Cincinnati, Cincinnati, Ohio; O. L. Fassig, Baltimore, Md.; Baltimore, Md., December 30-31, 1918.

Botanical Society of America: William Trelease, University of Illinois, Urbana, Ill.; J. R. Schramm, Cornell University, Ithaca, N. Y.; Baltimore, Md., December 27-31, 1918.

Child Conservation League of America: Winfield S. Hall, Berwyn, Ill.; Mrs. Minnette C. Hair, Woman's Temple, Chicago, Ill.; Chicago, Ill., March 13, 1919.

Geological Society of America: Whitman Cross, Washington, D. C.; Edmund Otis Hovey, American Museum of Natural History, New York, N. Y.; Baltimore, Md., December 27-30, 1918.

Jewish Agricultural and Industrial Aid Society: Alfred Jaretzki, 174 2d Ave., New York, N. Y.; Cyrus L. Sulzberger, 174 2d Ave., New York, N. Y.; New York, N. Y., February, 1919.

Mathematical Association of America: E. V. Huntington, Harvard University, Cambridge, Mass.; W. D. Cairns, Oberlin, Ohio; Hanover, N. H., September 6-7, 1918.

Modern Language Association of America: Edward C. Armstrong, Princeton University, Princeton, N. J.; William G. Howard, Harvard University, Cambridge, Mass.; Poughkeepsie, N. Y., December 26-28, 1918.

National Academy of Sciences: Charles D. Walcott, Smithsonian Institution, Washington, D. C.; Arthur L. Day, Smithsonian Institution, Washington, D. C.; Baltimore, Md., November, 1918.

National Agricultural Society: Howard R. Smith, Chicago, Ill.; Robert Scoville, 2 West 49th St., New York, N. Y.; New York, N. Y., April, 1919.

National Board for Historical Service: Secretary, Waldo G. Leland, 1133 Woodward Building, Washington, D. C.

National Civic Federation: V. Everit Macy, 68 Broad St., New York, N. Y.; D. L. Cease, American Trust Building, Cleveland, Ohio.

National Conference of Social Work: Julia Lathrop, Washington, D. C.; William T. Cross, 315 Plymouth Court, Chicago, Ill.; Atlantic City, N. J., May or June, 1919.

National Economic League: William Howard Taft, New Haven, Conn.; J. W. Beatson, 6 Beacon St., Boston, Mass.

National Efficiency Society, 119 West 40th St., New York, N. Y.: Melvil Dewey; Charles Dexter Allen.

National Forward to Land League: T. N. Carver, Cambridge, Mass.; Haviland H. Lund, Hotel Albert, New York, N. Y.; New York, N. Y., November 1, 1918.

National Geographic Society: Gilbert Grosvenor, Washington, D. C.; O. P. Austin, Hubbard Memorial Hall, Washington, D. C.; Washington, D. C., January 10, 1919.

National Institute of Arts and Letters: Augustus Thomas, 60 East 56th St., New York, N. Y.; Ashley Thorndike, Columbia University, New York, N. Y.; New York, N. Y., November or December, 1918.

National Institute of Social Sciences: Emory R. Johnson, University of Pennsylvania, Philadelphia, Pa.; Thomas P. Harris, 36th St. and Woodland Ave., Philadelphia, Pa.; New York, N. Y., January 17, 1919.

National Municipal League: Lawson Purdy, 105 East 22d St., New York, N. Y.; Clinton R. Woodruff, 703 North American Building, Philadelphia, Pa.

National Security League: Charles E. Lydecker, 2 Rector St., New York, N. Y.; Franklin Remington, 19 West 44th St., New York, N. Y.

Pan American Society of the United States: John Bassett Moore, 267 West 73d St., New York, N. Y.; Harry E. Bard, 15 Broad St., New York, N. Y.; New York, N. Y., February 14, 1919.

Society for the Promotion of Agricultural Science: Herbert Osborn, Ohio State University, Columbus, Ohio; C. P. Gillette, Fort Collins, Colo.; Washington, D. C., November 10–12, 1918.

Southern Commercial Congress: Robert W. Bingham, Louisville, Ky.; Clarence J. Owens, Southern Building, Washington, D. C.; Washington, D. C., 1919.

Southern Sociological Congress: Theodore D. Bratton, Jackson, Miss.; J. E. McCulloch, McLachlen Building, Washington, D. C.

XL.—STATE FEDERATION OF WOMEN'S CLUBS.

The officers of the General Federation of Women's Clubs (national organization) are: President, Mrs. Josiah Evans Cowles, 1101 West Adams St., Los Angeles, Cal.; secretary, Mrs. W. I. McFarland, Wagner, S. Dak.; manager bureau of information, Mrs. Mary I. Wood, Portsmouth, N. H.

Name.	President.	Secretary.	Meeting.
Alabama	Mrs. James R. Hagan, 200 St. Louis St., Mobile.	Mrs. W. C. Fritter, Dothan.	Huntsville, Nov., 1919
Arizona	Mrs. H. A. Guild, Phoenix		
Arkansas	Mrs. H. C. Gibson, College and Conservatory, Little Rock.		
California	Mrs. Herbert A. Cable, 1906 W. 42d Pl., Los Angeles.	Miss Anne Mumford, 623 Prospect Ave., Pasadena	San Diego, May 13, 14, 15, 1919.
Colorado	Mrs. Adam Weiss, Del Norte	Mrs. R. H. Bruce, Sterling	Pueblo, Sept. 23–28, 1918.
Connecticut	Mrs. James R. Mason, 62 Atwater Ave., Derby.	Mrs. M. A. Card, 115 Edna Ave., Bridgeport.	Unknown, Oct., 1918.
Delaware	Mrs. A. D. Warner, 2104 Grant Ave., Wilmington.	Mrs. W. E. Douglass, 1905 Monroe St., Wilmington.	May, 1919.
District of Columbia.	Mrs. Court F. Wood, 311 E. Capitol St., Washington.	Mrs. Jason Waterman, 1807 Third St., NE.	Washington, Oct. 28, 1918.
Florida	Mrs. Edgar Lewis, Fort Pierce	Mrs. Hawkins, Brooksville.	Daytona, Nov. 12, 1918.
Georgia	Mrs. Nellie Peters Black, 519 Spring St., Atlanta.	Mrs. Price Gilbert, 37 E. 14th St., Atlanta.	Columbus, Nov. 12, 13, 14, 1918.
Idaho	Mrs. M. J. Sweeley, 325 8th Ave., North Twin Falls.		
Illinois	Miss Jessie I. Spafford, 401 E. State St., Rockford.	Mrs. W. R. Hunter, Kankakee.	Unknown, May, 1919.
Indiana	Mrs. John Edward Moore, 902 W. Mulberry St., Kokomo.	Mrs. Emogene Taft-Sesh, Muncie.	Indianapolis, Oct. 22–25, 1918.
Iowa	Mrs. John W. Watzek, 1407 Brady St., Davenport.	Mrs. F. F. Faville, 1119 6th Ave. North, Fort Dodge.	Ames, 3d week of May, 1919.
Kansas	Mrs. H. O. Garvey, 515 Buchanan St., Topeka.	Miss N. Herren, 410 Topeka Ave., Topeka.	April or May, 1919.
Kentucky	Mrs. Lafon Riker, Harrodsburg	Mrs. John Lafon, Harrodsburg.	Next spring.
Louisiana	Mrs. A. F. Storm, Morgan City	Mrs. W. B. Reed, Morgan City.	New Orleans, Nov. 14, 1918.
Maine	Mrs. Myrtle L. White, Presque Isle.	Mrs. Idella Cross, Presque Isle.	Not decided.
Maryland	Mrs. Francis Sanderson, Walbrook.	Mrs. Albert P. Gove, Cecil Apartment, Baltimore.	Baltimore, April, 1919.
Massachusetts	Mrs. Herbert J. Gurney, 188 Warren Ave., Wollaston.	Miss Agnes L. Dodger, 265 Franklin St., Melrose Highlands.	Marlboro, Nov., 1918.
Michigan	Mrs. Albert E. Bulson, 1004 Francis St., Jackson.	Mrs. C. L. Thompson, 101 Houston Ave., Muskegon.	Battle Creek, Oct. 15–17, 1918.
Minnesota	Mrs. Geo. J. Allen, Rochester	Mrs. Austin A. Kennedy, Rochester.	Winona, Sept. 24, 25, 26, 1918.

XL.—State Federation of Women's Clubs—Continued.

Name.	President.	Secretary.	Meeting.
Mississippi	**Mrs. B. F. Saunders, Swan Lake.**	Mrs N. **Hawkins, Swan Lake.**	**Agricultural College, Nov. 19-23, 1918.**
Missouri	**Mrs. George A. Still, Kirksville**	Mrs. J. W. Parker, 4200 St. John Ave., **Kansas City.**	**St. Louis, May, 1919.**
Montana	**Mrs. W. T. Perham, Glendive**	Mrs E. F. Carey, **Missoula.**	**Glendive, May or June, 1919.**
Nebraska	Mrs. Addison E. Sheldon, Lincoln.	**Mrs. B. Miller, North Bend.**	**Fairbury, Oct., 1918.**
Nevada	Mrs. **Pearis** Buckner Ellis, 116 **N. Carson St.**, Carson City.	**Miss Rose Stewart, Carson City.**	**Elko, spring, 1919.**
New **Hampshire**	**Mrs.** A. H. Harriman, 778 Main **St., Laconia.**	**Mrs. James S. Smith, Avery** Court, **Laconia.**	**May, 1919.**
New **Jersey**	**Mrs. John R. Schermerhorn, 11 Halsted Pl.,** East Orange.	Mrs. **Frank** A. **Bailey,** Leonia.	Atlantic City, **May 8,** 9, 10, 1919.
New **Mexico**	**Mrs.** C. E. **Mason, Roswell**	**Mrs. S. L. Wilson, Raton.**	**Raton, Oct., 1918.**
New **York**	**Mrs. Geo.** D. Hewett, Carthage	Mrs. A. C. **Bage, 251 W. 92d St., New York City.**	New York City, **Nov., 11-16, 1918.**
North **Carolina**	**Mrs.** Clarence **A. Johnson, 109** N. **Boylan Ave., Raleigh.**	Mrs. Thomas Bost, Edenton **St., Raleigh.**	**Hendersonville, June, 1919.**
North **Dakota**	**Mrs.** H. G. **Vick,** Cavalier	Mrs. M. S. **McBride,** Cavalier.	**Grand Forks,** Oct. **15, 16, 17, 1918.**
Ohio	**Mrs.** Prentice **E. Rood, 738 Grove Pl., Toledo.**	**Mrs. William Harley Porter, 444 Kenilworth Ave.,** Toledo.	**Coshocton, Oct. 14-18, 1918.**
Oklahoma	**Mrs.** E. B. **Lawson,** Nowata	**Mrs. M. F. Earley, Muskogee.**	**Not decided.**
Oregon	**Mrs.** Chas. **H.** Castner, **Hood River.**	**Mrs.** J. **A. Pettit, 874 E.** Taylor **St., Portland.**	**Portland, Oct. 1, 2, 3,** 1918.
Pennsylvania	**Mrs.** Ronald **P.** Gleason, **947 Clay Ave., Scranton.**	Mrs. H. C. **Boden, 208 St.** Marks Sq., **Philadelphia.**	**York,** Oct. **15, 16, 17,** 1918.
Rhode Island	**Mrs. Howard** W. Farnum, Chepachet.	**Mrs.** Frank Chapman, 65 Atlantic Ave., **Providence.**	**Providence, Oct. or** Nov., **1918.**
South Carolina	**Mrs. Le Roy** Springs, Lancaster.	Miss **Margaret Moore,** Lancaster.	**Spring, 1919.**
South Dakota	**Mrs. Carl Gunderson, Vermilion.**	**Mrs. Grace** B. **Porter, Fort** Pierre.	**Sioux Falls, Oct. 8, 9, 10, 1918.**
Tennessee	**Mrs. Alex.** Caldwell, R. F. D. 9, Nashville.	Mrs. **Hallman Goodloe,** Linden Ave., **Nashville.**	Undecided.
Texas	Mrs. C. **W.** Connery, **1530** Cooper St., **Fort Worth.**	Mrs. W. H. **Moore, 612** Burnett St., **Fort Worth.**	**Dallas,** Nov. **18-22, 1918.**
Utah	**Mrs.** Edward Bichsel, 718 25th **St., Ogden.**	Mrs. John Culley, 2579 **Monroe Ave., Ogden.**	**Logan, Oct., 1918.**
Vermont	**Mrs.** Gilbert F. **Davis, 45 State** St., Windsor.	Mrs. **Leonard D. Wheeler, White River Junction.**	**Barre, May, 1919.**
Virginia	Mrs. John Lyle **Hagan, 254 Jefferson St., Danville.**	**Mrs.** Archibald D. Keen, **944 Main St., Danville.**	Undecided; **May, 1919.**
Washington	Mrs. N. S. **McCready, 124 Ave. B, Snohomish.**	**Mrs. George C. Howard,** 507 Ave. C, **Snohomish.**	**June, 1919.**
West Virginia	Mrs. **George De Bolt, 314 1st St.,** Fairmont.	**Mrs.** A. L. **Lehman,** Walnut Ave., **Fairmont.**	**Clarksburg, Oct. 24-27,** 1918.
Wisconsin	Mrs. L. D. Harvey, Menominie.	Mrs. E. A. **Morse,** Antigo.	**Eau** Claire, **Oct., 1918.**
Wyoming	**Mrs.** S Conant **Parks,** Lander.	Mrs. W. H. **Dickinson,** Lander.	**Cheyenne,** Oct. 1-4, 1918

XLI.—National Congress of Mothers and Parent-Teacher Associations.

The officers of the National Congress of Mothers and Parent-Teacher Associations are: **President,** Mrs. Frederic Schoff, Philadelphia, Pa.; **secretary, Mrs. Arthur A.** Birney, 1314 Massachusetts Avenue, Washington, D. C.

BRANCHES.

Name.	President.	Secretary.	Meeting.
Alabama	Mrs. H. S. Doster, Prattville		
Arizona	Mrs. J. C. Norton, 201 Fleming Bldg., Phoenix.	Mrs. Aubrey Smith, R. R. No. 2, Phoenix.	Phoenix, February, 1919.
California	Dr. Jessie A. Russell, 343 N. Maryland Ave., Glendale.	Mrs. William Eckhart	—— - May, 1919.
Colorado	Mrs. H. T. French, Fort Collins	Mrs. Weisser, Denver	Denver, Aug. 3, 1918.
Connecticut	Mrs. Geo. Brinton Chandler, Rocky Hill.	Mrs. H. M. Barnard, Rocky Hill.	New Haven, Sept. 17, 1918.
Delaware	Mrs. Garrett S. Harrington, Harrington.	Mrs. Robert Lewis, Dover.	Dover, April, 1919.

XLI.—NATIONAL CONGRESS OF MOTHERS AND PARENT-TEACHER ASSOCIATIONS—Continued.

BRANCHES—Continued.

Name.	President.	Secretary.	Meeting.
District of Columbia.	Mrs. Giles S. Rafter, 3105 16th St. NW.	Mrs. Ernest Daniel, 2111 19th St.	Washington, Oct. 15, 1918.
Florida [1]	W. N. Sheats, 3105 16th St., Tallahassee.		
Georgia	Mrs. J. E. Andrews, 8 Orange St., Atlanta.	Mrs. P. H. Jeter, Clairmont Ave., Decatur.	April, 1919.
Idaho	Mrs. E. J. Payne, 521 South 13th St., Boise.	Mrs. Ewen, Boise, R. D. 1.	May, 1919.
Illinois	Mrs. Harry Fleming, 1401 North Main St., Bloomington.	Mrs. James C. Riley, East Olive St., Bloomington.	Peoria, May, 1919.
Indiana	Mrs. Hence Orme, R. R. D., Box 313, Indianapolis.		
Iowa	Mrs. Allen O. Ruste, Charles City.	Miss Pamelia Fluent, Charles City.	Ames, Oct. 22–25, 1918.
Kansas	Mrs. J. K. Codding, Lansing	Miss Clara L. Mallory, 430 Pine St., Leavenworth.	Kansas City, April, 1919.
Kentucky	Mrs. Geo. C. Weldon, Eastleigh, Louisville.	Miss Elizabeth Stouffer, Weissinger Galbert, B. L. 29, Louisville.	Louisville.
Maine	Mrs. Hugh Ross Hatch, Fairfield	Mrs. Frank Dean, Winslow.	Portland, November, 1918.
Maryland	Mrs. Harry E. Parkhurst, 1410 Park Ave., Baltimore.	Mrs. William G. Hoskins, 1210 Linden Ave., Baltimore.	
Massachusetts	Mrs. Milton P. Higgins, 228 West St., Worcester.	Mrs. Edward French, Andover.	Pittsfield, Oct. 9, 10, 11, 1918.
Michigan	Mrs. C. E. Stewart, Battle Creek		
Mississippi	Mrs. H. P. Hughes, Agricultural College.		
Missouri	Mrs. J. H. Sheldon, 2550 Tracy Ave., Kansas City.	Mrs. Frank Dorsey, 4015 Prospect St., Kansas City.	
Montana	Mrs. H. B. Farnsworth, Missoula	Mrs. John E. Keach, Missoula.	Butte.
New Hampshire	Mrs. A. H. Harriman, 778 Main St., Laconia.	Mrs. Willis P. Lamprey, Court St., Laconia.	——— May, 1919.
New Jersey	Mrs. Wellington Bechtel, Haddonfield.	Mrs. S. P. Leeds, Chalfonte, Atlantic City.	Trenton, Nov. 8, 9, 1918.
New Mexico	Mrs. Ruth C. Miller, Sante Fe		
New York	Mrs. William A. Saltford, 16 North Ave., Poughkeepsie.	Mrs. Beatrice Moses, Gloversville.	Gloversville, October, 1918.
North Carolina [1]	Mrs. W. N. Hutt, West Raleigh [2].		
North Dakota	Mr. G. E. McLellan, Agricultural College, Fargo.		
Ohio	Mrs. Willits H. Sawyer, Central and Cardigan Ave., Columbus.	Mrs. Frank Sanborn, 90 14th Ave., Columbus.	Circleville, Oct. 3, 4, 5, 1918.
Oregon	Mrs. Fred G. Schilke, La Grande	Mrs. L. A. Harlow, Troutdale.	
Pennsylvania	Mrs. E. E. Kiernan, Somerset	Mrs. William Brice, Bedford.	Coatesville, Oct. 24, 25, 26, 1918.
Rhode Island	Mrs. Charles H. Remington, 216 Waterman Ave., East Providence.	Mrs. Joseph P. Canning, 73 Beaufort St., Providence.	Providence, Oct. 7, 1918.
South Carolina [1]	Mrs. Malcolm Woods, Marion [2]		
South Dakota	Mrs. Jean McKee Kenaston, Bonesteel.		
Tennessee	Mrs. Eugene Crutcher, 817 Lischey Ave., Nashville.	Mrs. G. M. Whittemore, 750 Wedgewood Ave., Nashville.	Knoxville, October, 1919.
Texas	Mrs. E. A. Watters, 814 Pennsylvania Ave., Fort Worth.	Mrs. L. T. Worley, 305 Gunter Bldg., San Antonio.	Wichita Falls, Nov. 6, 7, 8, 1918.
Utah	Mrs. John E. Dooley, 506 E. S. Temple St., Salt Lake City.		
Vermont	Mrs. Frank W. Pier, Brattleboro	Mrs. Edward B. Huling, Bennington.	Not decided; May, 1919.
Washington	Mrs. C. Arthur Varney, Yakima	Mrs. Richard Strobach, Yakima.	Do.
Wisconsin	Mrs. Edward Hammett, 1209 N. 7th St., Sheboygan.	Mrs. Ernest Gonzenbach, Pine Lodge, Sheboygan Falls.	Milwaukee, Nov. 7, 8, 1918.
Wyoming	Dr. Bertha N. Hamilton, Greybull.	Mrs. Frank Kelley, Sheridan.	Cheyenne, Oct. 1, 2, 3, 4, 1918.

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[1] No State branch.

[2] Organizer.

XLII.—Educational Periodicals.

List of American educational periodicals currently received by the library of the Bureau of Education.

[List of abbreviations: bm.—bimonthly; ir.—irregular; m.—monthly; q.—quarterly; sm.—semimonthly; w.—weekly.]

Alabama. *See* Educational Exchange.
American Church Sunday School Magazine. 201 North Second Street, Harrisburg (Pa.). m.
American Education. 50 State Street, Albany (N. Y.). 10 nos.
American Journal of Care for Cripples. 3505 Broadway, New York. q.
American Journal of School Hygiene. Worcester (Mass.). q.
American Oxonian. Menasha (Wis.). q.
American Penman. 30 Irving Place, New York. m.
American Physical Education Review. Springfield (Mass.). 9 nos.
American School. P. O. Box 134, Milwaukee. m.
American School Board Journal. 354 Milwaukee Street, Milwaukee. m.
American Schoolmaster. Ypsilanti (Mich.). 10 nos.
American Teacher. 225 Fifth Avenue, New York. 10 nos.
Americanization Bulletin, Bureau of Education, Washington (D. C.) sm.
Arizona Teacher. Phoenix. 10 nos.
Arkansas Teacher. Conway. 10 nos.
Boston Teachers News-Letter. Boston. 10 nos.
Bulletin of High Points in the Teaching of Modern Languages in the High Schools of New York City. Board of Education Building, New York. m.
Bulletin of the Board of Education of the Methodist Episcopal Church, South. Nashville (Tenn.). q.
Bulletin of the High School Teachers' Association of the District of Columbia. Washington (D. C.)
Business Educator. Columbus (Ohio). 10 nos.
California. *See* California Blue Bulletin; Modern Language Bulletin; Sierra Educational News; University of California Chronicle; Western Journal of Education.
California Blue Bulletin. Sacramento. q.
Carry On; a magazine on the reconstruction of disabled soldiers and sailors. Washington (D. C.) m.
Catholic Educational Review. Washington (D. C.). 10 nos.
Catholic School Journal. Milwaukee. 10 nos.
Child Labor Bulletin, 105 East Twenty-second Street, New York. q.
Child-Welfare Magazine. 227 South Sixth Street, Philadelphia. m.
Chinese Students' Monthly. Ashburnham (Mass.). 8 nos.
Christian Educator. Washington (D. C.). 10 nos.
Christian Student. 150 Fifth Avenue, New York. q.
Classical Journal. University of Chicago Press, Chicago. 9 nos.
Classical Weekly. Barnard College, New York. w. from October to May.
Colorado School Journal. Denver. 10 nos.
Columbia University Quarterly. New York. q.
Community Center. 1439 K Street NW., Washington (D. C.). m.
Connecticut. *See* New Haven Teachers Journal.
Current Education. Philadelphia. 10 nos.
District of Columbia. *See* Americanization Bulletin, Bulletin of the High School Teachers' Association of the District of Columbia; Carry On; Catholic Educational Review; Christian Educator; Community Center; Journal of the National Education Association; National School Service; School Life; Vocational Summary; Volta Review.
Education. 120 Boylston Street, Boston. 10 nos.
Education Bulletin. Trenton. 10 nos.
Educational Administration and Supervision. Warwick & York (Inc.), Baltimore. 10 nos.
Educational Exchange. Birmingham (Ala.). m.
Educational Foundations. 31–33 East Twenty-seventh Street, New York. 10 nos.
Educational Review. Columbia University, New York. 10 nos.
Educational Standards. Charlestown (Mass.). 10 nos.
Educator-Journal. 403 Newton Claypool Building, Indianapolis. m.
Elementary School Journal. University of Chicago Press, Chicago. 10 nos.
Engineering Education. Lancaster (Pa.). 10 nos.
English Journal. University of Chicago Press, Chicago. 10 nos.
English Leaflet. Newtonville (Mass.). m. except July, August, and September.
El Estudiante Latino-Americano. Ann Arbor (Mich.). bm.
Florida Schoolroom. Gainesville. 10 nos.
General Science Quarterly. Salem (Mass.). q.
Georgia. *See* High School Quarterly; School and Home.
Harvard Graduates' Magazine. Boston. q.
Hawaii Educational Review. Honolulu. 10 nos.
High School Journal. Chapel Hill (N. C.). q.
High School Quarterly. Athens (Ga.). q.
Historical Outlook, formerly History Teacher's Magazine. McKinley Publishing Co., Philadelphia. 10 nos.
Home and School Guest. Stroudsburg (Pa.). q.
Hospital School Journal. Detroit (Mich.). m.
Illinois. *See* Classical Journal; Elementary School Journal; English Journal; Illinois Association of Teachers of English Bulletin; Illinois Teacher; Journal of the Association of Collegiate Alumnæ; Manual Training Magazine; Religious Education; School and Home Education; School Century; School News and Practical Educator; School Review; School Science and Mathematics; University Record.
Illinois Association of Teachers of English Bulletin. Urbana. 8 nos.
Illinois Teacher. Urbana. 10 nos.
Indiana. *See* Educator-Journal; Indiana Instructor; Teacher's Journal.
Indiana Instructor. Indianapolis. m.
Industrial-Arts Magazine. Bruce Publishing Company, Milwaukee. m.
Inter-Mountain Educator. Missoula (Mont.). 10 nos.
Iowa. *See* Midland Schools; School Music.
Johns Hopkins Alumni Magazine. Baltimore. q.
Journal of Applied Psychology. Worcester (Mass.). q.
Journal of Education. 6 *Beacon Street, Boston.* w.

Journal of Educational Psychology. Warwick & York (Inc.), Baltimore. 10 nos.

Journal of Experimental Psychology. Princeton (N. J.). bm.

Journal of Geography. Madison (Wis.). 10 nos.

Journal of Home Economics. 1211 Cathedral Street, Baltimore. m.

Journal of the Association of Collegiate Alumnæ. University of Chicago Press, Chicago. 10 nos.

Journal of the National Education Association. 1400 Massachusetts Avenue, Washington (D.C.) 10 nos.

Journal of the New York State Teachers' Association. Rochester. 8 nos.

Kansas. *See* Kansas Journal of Education: Kansas Teacher; Teaching.

Kansas Journal of Education. Kansas City. w. except June, July and August.

Kansas Teacher. Topeka. m.

Kentucky. *See* Kentucky High School Quarterly; Southern School Journal.

Kentucky High School Quarterly. Lexington. q.

Kindergarten and First Grade. Springfield (Mass.). 10 nos.

Kindergarten-Primary Magazine. Manistee (Mich.). 10 nos.

Louisiana. *See* Southern School Work.

Maine State School Bulletin. Augusta. 10 nos.

Manual Training Magazine. Peoria (Ill.). 10 nos.

Maryland. *See* Educational Administration and Supervision; Johns Hopkins Alumni Magazine; Journal of Educational Psychology; Journal of Home Economics.

Massachusetts. *See* American Journal of School Hygiene; American Physical Education Review; Boston Teachers News-Letter; Chinese Students' Monthly; Education; Educational Standards; English Leaflet; General Science Quarterly; Harvard Graduates' Magazine; Journal of Applied Psychology; Journal of Education; Kindergarten and First Grade; Pedagogical Seminary; Popular Educator; Primary Education; School Arts Magazine; Vocational Guidance Bulletin.

Mathematics Teacher. Lancaster (Pa.). q.

Mental Hygiene. Concord (N. H.). q.

Michigan. *See* American Schoolmaster; El Estudiante Latino-Americano; Hospital School Journal; Kindergarten-Primary Magazine; Moderator-Topics.

Middle-West School Review. Omaha (Nebr.). m.

Midland Schools. Des Moines. 10 nos.

Mind and Body. New Ulm (Minn.). 10 nos.

Minnesota. *See* Mind and Body; School Education.

Mississippi Educational Advance. Jackson. 10 nos.

Missouri. *See* Missouri Journal of Education; Missouri School Journal; Rural School Messenger.

Missouri Journal of Education. Kansas City. w. except June, July and August.

Missouri School Journal. Jefferson City. 10 nos.

Moderator-Topics. Lansing (Mich.). w. except July and August.

Modern Language Bulletin. Los Angeles. 3 nos.

Modern Language Journal. 68th and Park Avenue, New York. 8 nos.

Monatshefte für Deutsche Sprache und Pädagogik. Milwaukee. 10 nos.

Montana. *See* Inter-Mountain Educator.

Music Supervisors' Journal. Madison (Wis.). q.

National Association of Corporation Schools Bulletin. Irving Place and Fifteenth Street, New York. m.

National School Service. Committee on Public Information, Washington (D. C.). sm.

Nature-Study Review. Ithaca (N. Y.). 9 nos.

Nebraska. *See* Middle-West School Review; Nebraska Teacher.

Nebraska Teacher. Lincoln. 10 nos.

Nevada School Journal. Carson. 10 nos.

New Hampshire. *See* Mental Hygiene.

New Haven Teachers Journal. New Haven (Conn.). bm.

New Jersey. *See* Education Bulletin; Journal of Experimental Psychology; School News; Training School Bulletin.

New Mexico Journal of Education. Santa Fe. 10 nos.

New York. *See* American Education; American Journal of Care for Cripples; American Penman; American Teacher; Bulletin of High Points in the Teaching of Modern Languages in the High Schools of New York City; Child Labor Bulletin; Christian Student; Classical Weekly; Columbia University Quarterly; Educational Foundations; Educational Review; Journal of the New York State Teachers' Association; Modern Language Journal; National Association of Corporation Schools Bulletin; Nature-Study Review; Normal Instructor and Primary Plans; Physical Training; Playground; School; School and Society; School Bulletin; Teachers College Record; Teacher's Monographs; Ungraded; Vocationist.

Normal Instructor and Primary Plans. Dansville (N. Y.). 10 nos.

North Carolina. *See* High School Journal; North Carolina Education; Training School Quarterly.

North Carolina Education. Raleigh. 10 nos.

North Dakota. *See* Quarterly Journal of the University of North Dakota.

Northwest Journal of Education. Seattle. 10 nos.

Ohio. *See* Business Educator; Ohio Educational Monthly; Ohio History Teachers' Journal; Ohio Teacher; School Index; Sunday School Journal.

Ohio Educational Monthly. Columbus. m.

Ohio History Teachers' Journal. Columbus. q.

Ohio Teacher. Columbus. m.

Oklahoma Journal of Education. Oklahoma City. w. except June, July, and August.

Oklahoma School Herald. Oklahoma City. 10 nos.

Oregon Teachers' Monthly. Salem. 10 nos.

Pedagogical Seminary. Worcester (Mass.). q.

Pennsylvania. *See* American Church Sunday School Magazine; Child-Welfare Magazine; Current Education; Engineering Education; Historical Outlook; Home and School Guest; Mathematics Teacher; Pennsylvania School Journal; Pittsburgh School Bulletin; Psychological Clinic; Stenographer and Phonographic World.

Pennsylvania School Journal. Lancaster. m.

Philippine Education. Manila. 10 nos.

Philippine News Review. Manila. sm.

Physical Training. 124 East Twenty-eighth Street, New York. 10 nos.

Pittsburgh School Bulletin. Pittsburgh. 10 nos.

Playground. 1 Madison Avenue, New York. m.

Popular Educator. 50 Bromfield Street, Boston. 10 nos.

Porto Rico School Review. San Juan. 10 nos.

Primary Education. 50 Bromfield Street, Boston. 10 nos.

Progressive Teacher. Nashville. 10 nos.

Psychological Clinic. Woodland Avenue and Thirty-sixth Street, Philadelphia. 9 nos.

Journal of Speech Education. Menasha (Wis.). q.
Journal of the University of North Dakota. University. q.
Education. 1440 East Fifty-seventh Street, Chicago. bm.
ool Messenger. Kirksville (Mo.). 8 nos.
54 Fifth Avenue, New York. w. except August.
l Home. Atlanta (Ga.). m.
l Home Education. Bloomington (Ill.). 10 nos.
l Society. Garrison-on-Hudson (N. Y.). w.
ts Magazine. 25 Foster Street, Worcester (Mass.). 10 nos.
lletin. Syracuse (N. Y.). m.
ntury. Oak Park (Ill.). 10 nos.
ucation. Minneapolis. 10 nos.
lex. Cincinnati. w.
e. Bureau of Education, Washington (D. C.). sm.
usic. Keokuk (Iowa). bm. except July
ws. New Egypt (N. J.). m.
ws and Practical Educator. Taylorville (Ill.). 11 nos.
view. University of Chicago Press, Chicago. 10 nos.
ence and Mathematics. Mount Morris (Ill.). 9 nos.
ucational News. San Francisco. 10 nos.
kota Educator. Mitchell. 10 nos.
School Journal. Lexington (Ky.). m.
School Work. Baton Rouge. 10 nos.
Workman. Hampton (Va.). m.
her and Phonographic World. 23 South Fifty-second Street, Philadelphia m.
chool Journal. Methodist Book Concern, Cincinnati. m.
College Record. Teachers College, Columbia University, New York. bm. except July.
Journal. Marion (Ind.). m.
Monographs. 16 Court Street, Brooklyn (N. Y.). 8 nos.
Emporia (Kans.). m.
. *See* Bulletin of the Board of Education of the Methodist Episcopal Church, South; Progressive
.
ool Journal. Dallas. 10 nos.
School Bulletin. Vineland (N. J.). 10 nos.
School Quarterly. Greenville (N. C.). q.
. 500 Park Avenue, New York. 9 nos.
y of California Chronicle. Berkeley. q.
y Record. University of Chicago Press, Chicago. q.
ucational Review. Salt Lake City. 10 nos.
See Southern Workman; Virginia High School Bulletin; Virginia Journal of Education; Vir-
ate Teachers' Association Quarterly.
High School Bulletin. University. q.
ournal of Education. Richmond. 10 nos.
tate Teachers' Association Quarterly. Richmond. q.
l Guidance Bulletin. Cambridge (Mass.).
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COURSES OF STUDY FOR THE PREPARATION OF TEACHERS OF MANUAL ARTS

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COURSES OF STUDY FOR THE PREPARATION OF TEACHERS OF MANUAL ARTS.

I.—INTRODUCTION.

The training of special teachers of manual arts is of comparatively recent origin. Most of the institutions whose courses have been studied in the preparation of this paper have organized definite curricula within the last decade. It is therefore apparent that the pioneer days are still with us.

The Massachusetts Normal Art School, established in 1873, was among the first schools in the United States to offer courses of this sort. However, the school early turned its attention to the art field and has not specifically trained teachers of the type we are considering. The Trenton (N. J.) Normal School offered certain technical courses as early as 1890, or a little later, but it was only the man of unusual ability who would be selected as a special teacher of manual arts. Pratt Institute developed a combination art and manual training course about the same time. However, some of these students later went to Teachers College, Columbia University, for courses in pedagogy, for which adequate provision was not made at Pratt Institute at that time. By a curious coincidence, the present Teachers College students, a generation later, may get their technical courses at Pratt Institute.

The first definite organization of a course to prepare special teachers of manual training was made by Teachers College in 1891, when Prof. Charles A. Bennett was called from the principalship of the St. Paul (Minn.) Manual Training High School to become head of the department of manual training. He had the honor of offering the first course in the pedagogy of the manual arts ever given for an advanced degree. He also had the privilege of determining in a large measure the character of the Macy Manual Arts Building, which became the model in arrangement and equipment for many other schools. The first man to graduate from this course was William F. Vroom, who is still engaged in teaching in the New York public schools.

In the Middle West small beginnings were made in private institutions, such as the Chicago Manual Training School, which later became a part of the University of Chicago; the Francis W. Parker School; Bradley Polytechnic Institute; and in the State normal schools. The most recent additions are the special State normal schools for training these teachers, and the departments of manual arts in our State universities.

II.—NUMBER AND CHARACTER OF SUCH INSTITUTIONS IN THE UNITED STATES.

A study of available material indicates that there are not less than 184 institutions of various kinds in the United States which offer more or less extended curricula designed for the preparation of teachers. There are also three in our territorial possessions—one in Porto Rico, one in Honolulu, and one in the Philippines. These schools are of the following types, the numerals indicating the numbers in each case: 23 State universities, 13 private universities, 6 colleges, 17 State agricultural colleges, 15 State teachers colleges, normal colleges, and normal universities, 3 State manual training normal schools, 62 State normal schools, 15 colored schools with normal departments, 8 private schools with normal departments, 10 technical schools with normal departments, 4 private normal schools, 7 municipal colleges, universities, and normal schools.

Institutions having curricula for preparation of manual training teachers.

Location.	Institution.
ALABAMA.	
Auburn	Alabama Polytechnic Institute.
Florence	State Normal School.
Jacksonville	Do.
Livingston	Do.
Montgomery	Agricultural and Mechanical College for Negroes.
Normal	State Normal School for Negroes.
Troy	State Normal School.
Tuscaloosa	University of Alabama.
Tuskegee	Normal and Industrial Institute (colored).
ARIZONA.	
Flagstaff	State Normal School.
Tempe	Do.
Tucson	University of Arizona.
ARKANSAS.	
Fayetteville	University of Arkansas.
CALIFORNIA.	
Berkeley	University of California.
Chico	State Normal School.
Fresno	Do.
Los Angeles	Do.
San Diego	Do.
San Francisco	California School of Mechanical Arts.
San Jose	State Normal School.
Santa Barbara	State Normal School of Manual Arts and Home Economics.
Stanford University	Leland Stanford, jr., University.
COLORADO.	
Fort Collins	State Agricultural College.
Gunnison	State Normal School.
CONNECTICUT.	
Hartford	Hillyer Institute.
DISTRICT OF COLUMBIA.	
Washington	Howard University (colored).
GEORGIA.	
Atlanta	Atlanta University (colored).
HAWAII.	
Honolulu	Territorial Normal School.
IDAHO.	
Albion	State Normal School.
Lewiston	Do.
Moscow	University of Idaho.
ILLINOIS.	
Carbondale	Southern Illinois State Normal University.
Charleston	State Normal School.
Chicago	Lewis Institute.
Do	University of Chicago.
Do	Chicago Normal College.
Do	F. W. Parker School.
Do	Chicago Technical College.
Decatur	James Millikin University.
De Kalb	State Normal School.
Macomb	Do.
Mooseheart	Vocational and Industrial Institute.
Normal	State Normal University.
Peoria	Bradley Polytechnic Institute.
INDIANA.	
Bloomington	Indiana State University.
LaFayette	Purdue University.

utions having curricula for preparation of manual training teachers—Continued.

ocation.	Institution.
ANA—contd.	
ton	Princeton Normal and Industrial University. (colored).
Haute	Indiana State Normal School.
raiso	Valparaiso University.
IOWA.	
Falls	State Teachers College.
oines	Des Moines College.
ity	State University of Iowa, Department of Manual Arts.
ndoah	Western Normal College.
KANSAS.	
ria	State Normal College.
	Fort Hays Kansas Normal School.
nce	University of Kansas.
urg	State Manual Training Normal School.
ENTUCKY.	
	Berea College.
fort	Kentucky Normal and Industrial Institute.
gton	University of Kentucky.
n Ridge	Lincoln Institute of Kentucky (colored).
ond	State Normal College.
OUISIANA.	
Rouge	Louisiana State University and Agricultural and Mechanical College.
itoches	State Normal School.
MAINE.	
m	State Normal School.
	State Agricultural College.
SACHUSETTS.	
n	Sloyd Training School.
o	Massachusetts Normal Art School.
o	Franklin Union.
ridge	Harvard University.
urg	State Normal School.
ICHIGAN.	
it	Thomas Normal Training School.
nasoo	State Normal School.
t Pleasant	Do.
INNESOTA.	
ato	State Normal College.
apolis	University of Minnesota.
ead	State Normal School.
oud	Do.
ul	Macalaster College.
o	University of Minnesota, College of Agriculture.
ter	Gustavus Adolphus College.
na	State Normal School.
ISSISSIPPI.	
ville	Mississippi Agricultural and Mechanical College.
y	Industrial Agricultural College for Negroes.

Location.	Institution.
MISSOURI.	
Cape Girardeau	State Normal School.
Columbia	University of Missouri.
Warrensburg	State Normal School.
MONTANA.	
Bozeman	State College of Agriculture.
NEBRASKA.	
Lincoln	University of Nebraska.
Peru	State Normal School.
NEW HAMPSHIRE.	
Durham	New Hampshire College of Agriculture and Mechanic Arts.
Keene	State Normal School.
Plymouth	Do.
NEW JERSEY.	
New Brunswick	State Agricultural College.
Trenton	State Normal School.
NEW MEXICO.	
East Las Vegas	State Normal University.
Silver City	State Normal School.
NEW YORK.	
Albany	State College for Teachers.
Alfred	Alfred University.
Brooklyn	Pratt Institute.
Buffalo	State Normal School.
New York City	Teachers College (Columbia University).
Do	New York University.
Do	Hunter College of the City of New York.
Do	Ethical Culture Schools
Oswego	State Normal School.
Rochester	Mechanics Institute.
Syracuse	Syracuse University.
NORTH CAROLINA.	
Greensboro	State Normal College.
Raleigh	Shaw University (colored).
Do	St. Augustine's School.
West Raleigh	State College of Agriculture and Engineering
NORTH DAKOTA.	
Ellendale	State Normal School.
Fargo	North Dakota Agricultura College.
Grand Forks	University of North Dakota.
Mayville	State Normal School
Minot	Do.
Valley City	Do.
OHIO.	
Athens	Ohio University.
Bowling Green	State Normal College
Cincinnati	University of Cincinnati.
Cleveland	Cleveland School of Education.
Columbus	Ohio State University.
Dayton	St. John Normal School.
Delaware	Ohio Wesleyan University.
Kent	State Normal College.
Oxford	Miami University.
Toledo	Toledo University.

Institutions having curricula for preparation of manual training teachers—Continued.

Location	Institution.
OKLAHOMA.	
Ada	State Normal School.
Alva	Do.
Edmond	Do.
Norman	University of Oklahoma.
Stillwater	Oklahoma Agricultural and Mechanical College.
Tahlequah	State Normal School.
Weatherford	Do.
OREGON.	
Corvallis	Oregon Agricultural College.
PENNSYLVANIA.	
Bloomsburg	State Normal School.
Edinboro	Do.
Indiana	Do.
Lewisburg	Bucknell University.
Mansfield	State Normal School.
Philadelphia	Philadelphia Trades School.
Do	Temple University.
Pittsburgh	Carnegie Institute of Technology.
Do	University of Pittsburgh.
Reading	Normal Training School.
State College	Pennsylvania State College.
Williamson School	Williamson Trade School.
PHILIPPINE ISLANDS.	
Manila	Philippine Public Schools.
PORTO RICO.	
Rio Piedras	Normal College.
RHODE ISLAND.	
Providence	State Normal School
SOUTH CAROLINA.	
Columbia	University of South Carolina.
Orangeburg	Colored Normal, Industrial, Agricultural, and Mechanical College of South Carolina.
Do	Claflin University (colored).
SOUTH DAKOTA.	
Aberdeen	State Normal School.
TENNESSEE.	
Johnson City	East Tennessee State Normal School.
Knoxville	Knoxville College (colored).
Do	University of Tennessee.
TENNESSEE—contd.	
Memphis	West Tennessee State Normal School.
Murfreesboro	Middle Tennessee State Normal School.
Nashville	State Agricultural and Industrial Normal School for Negroes.
Do	George Peabody School for Teachers.
TEXAS.	
Austin	University of Texas.
Canyon City	State Normal College.
College Station	Agricultural and Mechanical College of Texas.
Commerce	East Texas State Normal College.
Denton	College of Industrial Arts.
Do	North Texas State Normal School.
Huntsville	Sam Houston Normal Institute.
Prairie View	State Normal and Industrial College (colored).
San Marcos	State Normal School.
UTAH.	
Logan	State Agricultural College.
Salt Lake City	University of Utah.
VERMONT.	
Burlington	University of Vermont.
VIRGINIA.	
Hampton	Hampton Normal and Agricultural Institute (colored)
Williamsburg	College of William and Mary.
WASHINGTON.	
Bellingham	State Normal School.
Cheney	Do.
Ellensburg	Do.
Pullman	State College of Washington.
Seattle	University of Washington.
Do	Public School Department.
WEST VIRGINIA.	
Morgantown	West Virginia University.
WISCONSIN.	
Madison	University of Wisconsin.
Menomonie	Stout Institute.
Oshkosh	State Normal School.

III.—TYPES OF CURRICULA AS TO CHARACTER AND LENGTH OF TIME REQUIRED.

An almost infinite variety of courses are being offered in these schools. It has not been possible to secure catalogues or other information from a large number; hence the following list may not be inclusive of all types:

1. The University of Wisconsin has a part-time plan in operation through its extension department, whereby men of superior ability as workmen in the trades are given some brief specific instruction as to methods and principles of teaching. A somewhat similar

plan has been followed by the University of Indiana for tradesmen, in connection with the Smith-Hughes Act.

2. One-year course. A few institutions offer a course of but one year in length, as the Thomas Normal School, Detroit. In this case the various subjects are of necessity barely touched upon. The student is supposed to teach one year with success after his year in school before receiving the diploma.

3. The regular two-year normal course. This is typical of State normal school practice everywhere. The student follows prescribed courses in education, and in review and special methods courses in the common branches with permission to take a limited number of units of credit in manual training. For example, in the two-year curriculum for high-school graduates leading to the advanced diploma at the Moorehead (Minn.) State Normal School, 120 hours, or two terms, of such work may be selected. At the Warrensburg (Mo.) Normal School a student may elect not more than 10 semester hours of technical subjects for the so-called "60 semester hour course." In the former case the amount would be about 7 per cent of the entire course, including practice teaching; in the latter case the amount may not exceed 16 per cent.

4. Three-year combination. A number of the State normal schools offer a curriculum of one year of specialized technical training, based upon the previous completion of the regular two-year course. Arrangements seem possible permitting the student to arrange his work so that the technical work may be spread out over the three years. The student receives both the regular normal (two-year) diploma and a special certificate or diploma. In the case of the Macomb (Ill.) State Normal School, 13 of the 28 credits are in manual training, while the balance are the regular courses.

At the Northern Normal and Industrial School, Aberdeen, S. Dak., 130 term hours of general subjects and 65 term hours of technical subjects are specified as required. The remaining 165 term hours are electives, of which 27½ may be technical. In short the offering of the department is apparently exhausted when the student has taken 92½ hours of technical work, which is approximately 25 per cent of the total of 360 term hours required for graduation.

5. Two-year curricula for specialists are quite common. These vary in the proportion of time given to the technical and to general subjects according to the institution. The State normal schools commonly stress subject matter and methods courses in the common branches more than do the private technical schools. There is also considerable variation as to the aim of these courses. For example, at Bradley Institute it is rather expected that the two-year man will "teach in the upper grammar grades or the smaller high school." He is given a variety of technical subjects but is not supposed to become *a narrow specialist* because of his training. The Peru

(Nebr.) State Normal School has a two-year course entitled "Supervisor's course in manual training." At Stout Institute each student selects in his second year two of the four lines of work offered, and to that extent becomes a specialist in his teaching.

6. Three-year courses. A number of schools offer three-year curricula which place emphasis upon the technical subjects. The aim is to prepare men for positions in the larger high schools and in vocational schools.

7. Four-year courses. Curricula of four years are becoming comparatively common. These are offered by the universities, technical schools, and some of the State normal schools. Some lead to a degree; others apparently do not. In general these courses may be grouped under the following heads:

(*a*) Curricula which frankly train specialists in manual arts and which give considerable emphasis to definite technical work with less consideration of academic material.

(*b*) Curricula dividing the program equally or nearly so between technical courses and related special methods courses on the one hand, with general courses in education, English, etc., on the other.

(*c*) Several universities permit a student to "major" in the manual arts department and to carry a sequence of courses amounting to approximately one-fourth of his total requirement. The exact amount varies with institutions; for example, at the University of Wisconsin as many as 40 semester hours, or one-third of graduation requirement, are allowed. At the University of Chicago a "long sequence" of 9 majors may be taken, thus covering one-fourth of the 36 majors required for the degree. It is, however, possible for a student to take a maximum of 15 majors of work within any department, so that he may devote 40 per cent of his time to the chosen field.

(*d*) In a similar manner students may elect manual arts as a "minor" for their degree. At the University of Iowa this will total 14 semester hours out of the 120 required for graduation.

8. Special courses of decided technical character are being offered by such schools as Williamson Free School of Mechanical Trades, Bradley Institute, and others. At the former institution the student spends three years learning a trade as a regular indentured apprentice. He then must spend not less than two years in commercial work as a tradesman. He may then return for a period of 11 months for specific preparation fitting him for teaching. At Bradley Institute a course is available for teachers of automobile work. The first year is entirely technical in character and is complete in itself. The student then enters a commercial garage for actual experience. If he does approved work for a period of not less than three months, he may return for a second year of work in which emphasis is placed upon pedagogy, English, chemistry, and practice teaching, in addition to certain technical courses.

IV.—ENTRANCE REQUIREMENTS.

dmission requirements in normal schools are so varied and plex that classification requires individual treatment of each itution. However, available catalogues almost without excep- call for the completion of four years of approved high-school k as admission requirements. There are certain additional equisites found in many cases. The University of Missouri for experience in the trades before admitting men to the two- r course. The same rule is followed in the case of Williamson ool of Trades, as previously noted. The Fitchburg (Mass.) mal School will admit men who have had either (1) four years igh-school work, (2) four years of experience in an approved trade, 3) a combination of 1 and 2.

V.—FACULTIES.

he following table indicates, as far as a study of catalogs permits, number of instructors who may be considered as members of the ual arts department in their respective schools. The exact res can not be determined in most of the larger institutions he shopwork is often done in the engineering shops, and is taught nen who evidently belong to the engineering college of the institu- .. This table indicates the character of training of these in- ctors as to kind of degree or diploma held.

Degrees held by instructors of manual training.

Institutions.	Degrees.							Diplomas.	Number in department of manual arts.
	A.M.	M.S.	A.B.	B.S.	B.S.M.E.	Ph.B.	B.Ar.		
rsity of Missouri	1		1	3	1				8
University (Athens)		1		2					3
State University	1		1	2	2				11
State University			1						(1)
rsity of North Dakota			3		1			1	4
a University				3					9
rsity of Chicago				1		3			9
Institute				3				6	13
ey Institute	1			2	3		1	2	12
as State Manual Training Nor- School			1	2	2			1	7
ensburg (Mo.) Normal School								1	1
mb (Ill.) Normal School				1					2
alb (Ill. Normal School			1						2
leen (S. Dak.) Normal School								3	3
on (N. J.) Normal School				1					(1)
na State Normal School				(2)					4
Tennessee State Normal School			1						1
head (Minn.) State Normal ool								1	2
Mexico State Normal School				1					1
eastern Oklahoma State Nor- School									1
ison (Colo.) State Normal ool			1						1
(Nebr.) State Normal School				2					3
sh (Wis.) State Normal School			1	1	1			2	7
State College	1			1				2	4

[1] Incomplete.

[2] Not given.

Since the success of the graduates of any school is in a large measure dependent upon the experience as well as the training of the faculty, an attempt was made to note the teaching and trade experience of the members of the manual arts faculty. This was possible in a few cases only, as such information is seldom given in the annual catalogs. The following table indicates the findings in the cases of four institutions:

Teaching and trade experience of the instructors of manual training.

Institutions.	Instructors.	Average teaching experience, in years.	Average trade experience, in years.
Stout Institute	13	8$\frac{2}{13}$	6
Bradley Institute	12	9	5¼
Kansas State Manual Training Normal School	7	8	3
Iowa State College	4	11¾	½

VI.—EQUIPMENTS—BUILDINGS, LABORATORIES, SHOPS.

While it is obvious that adequate training is dependent upon ample physical resources and equipment, it is difficult to make a comparative study of schools. As a rule the State universities make use of the equipment found in (*a*) engineering classes or (*b*) model high schools. The variations run from elaborate to meager. Normal schools as a rule are not very well equipped for lines other than simple woodwork. . These follow in order: Mechanical and freehand drawing, craft work, leather, clay, basketry, printing, metal working, machine shop, forging.

Strong courses for the preparation of teachers involve considerable outlay for equipment, as exemplified in the larger schools giving special emphasis to work of this character. Among eastern schools may be mentioned Williamson Free School of Mechanical Trades and Pratt Institute; in the Central West, Stout Institute, Oshkosh Normal School, Bradley Institute, Kansas State Manual Training Normal School. In general, the normal school or university equipment must be at least equal to what may be found in the schools in which the graduates teach. It should also be typical of good practice rather than so elaborate that the student is unable to adjust himself to mediocre conditions outside.

VII.—TYPICAL TWO-YEAR COURSES OF STUDY.

The following outlines are arranged to show the number and nature of the subjects included in the two-year courses offered in several typical schools. The numeral following a subject indicates term or semester hours. The division in two or three parts indicates that the school runs on a basis of a term of 12 weeks or a semester of 18 to 20 weeks.

UNIVERSITY OF MISSOURI.

First Year.	*Second Year.*
Psychology, 4. Woodwork, 2. Mechanical drawing, 2. Tools and materials, 1. Manual arts electives, 6.	Administration of manual arts, 2. Pattern making, 2. Furniture making, 2. Machine shop, 2. Elective manual arts, 5.
Theory of teaching, 3. Introduction to art, 5. Metal work, 2. Manual arts electives, 5.	History of manual arts, 1. Teaching manual arts, 2. Furniture making, 2. Machine shop, 2. Manual arts elective, 8.

BRADLEY INSTITUTE.

First Year.	*Second Year.*
History of education, 5. * Woodworking, 5. * Mechanical drawing, 5. * Metal working, 5.	History of manual arts, 5. Teaching mechanical drawing, 5. * Teaching woodworking, 5. * Design.
English composition, 5. * Woodfinishing and upholstery, 5. * Freehand drawing, 5. * Sheet metal work, 5.	Principles of Teaching, 5. * Constructive design, 5. * Mechanical perspective, 5. * Architectural drawing.
Psychology. * Carpentry and turning, 5. * Mechanical drawing, 5. * Art metal work, 5.	Advanced English composition, 5. * Organization of manual arts, 5. * Bookbinding and clay work, 5. * Furniture making, 5.

KENT (OHIO) NORMAL COLLEGE.

First Year.	*Second Year.*
History of education. English composition. Mechanical drawing. Elementary manual training.	History of manual training. Practice teaching. House planning. Principles of design.
Psychology. Library economy. Freehand drawing. Woodworking. Metal working.	Practice teaching. Public school handwork. Woodworking. Constructive design.
Principles of teaching. Manual training literature. Mechanical drawing. Woodworking.	Practice teaching. Organization of manual training. Woodworking. Electives.

DEKALB (ILL.) NORMAL SCHOOL.

First Year.	*Second Year.*
Psychology, 4. Arithmetic, 4. Mechanical drawing, 5. Bench work, 10. Printing, 10.	Courses, equipment, 5. Teaching. Rhetoric, 5. Sociology, 5. Metal work, 5.
Psychology, 4. Algebra, 5. Themes, 1. Mechanical drawing, 5. Bench work, 10. Printing, 10.	Teaching. Advanced physics. Turning. Mechanical drawing.
Political economy, 5. Solid geometry, 5. Mechanical drawing, 5. Bench work, 10. Printing, 10.	Teaching. History of Education, 5. Book binding, 10. Mechanical drawing, 5.

* Double periods.

OHIO UNIVERSITY, ATHENS.

First Year.	*Second Year.*
Psychology, 3.	History and organization of manual training, 2.
English composition, 3.	Teaching, 2.
Mechanical drawing, 2.	Industrial education, 2.
School drawing, 1.	Cabinet making, 2.
Elementary woodwork, 2.	Pattern making, 2.
Wood finishing, 2.	Carpentry, 2.
Joinery, 2.	Mechanical drawing, 2.
	Electives, 3.
Principles of education, 2.	Teaching, 2.
Forestry or English, 2.	Cabinet-making, 2.
Observation and methods, 2.	Constructive design, 2.
Mechanical drawing, 2.	Mechanical drawing, 1.
Bench work, 2.	Machine shop, 2.
Wood turning, 2.	Hammered metal work, 2.
School management, 2.	Electives.
Shop equipment, 1.	

IOWA STATE TEACHERS COLLEGE.

First Year.	*Second Year.*
Psychology, I 5.[1]	History of education, 5.
Psychology, II.	Teaching, 8½.
Freshman English, 5.	Manual training methods, 5.
Mechanical drawing, 2.	Woodwork, 5.
Woodwork, 7.	Woodturning, 2.
Perspective, 2½.	Special electives, 5.
Design, 2½	General electives, 12½.
Illustrative teaching, 1½.	
Sheet metal work, 2½.	
Elementary handwork, 2½.	

OSHKOSH (WIS.) NORMAL SCHOOL.

First Year.	*Second Year.*
Psychology, 2.[2]	History of manual training and courses of study, 5.
English composition, 3.	School management, 2.
Mechanical drawing, 10.	Practice teaching, 3.
Woodwork and turning, 10.	Advanced cabinet making, 15.
Forging, 10.	Crafts and applied design, 5.
Freehand drawing, 2.	Vocational mathematics, 5.
Applied design, 5.	
	Organization of manual training, 5.
Psychology, 2.	Practice teaching, 3.
English composition, 3.	Machine shop work, 15.
Mechanical drawing, 10.	Craftwork, 5.
Cabinetmaking, 10.	Mechanical drawing and machine design, 6.
Pattern-making, 2.	Construction and materials, 4.
Foundry practice, 10.	Ten weeks of commercial shop experience prerequisite for graduation.
Freehand drawing, 2.	
Applied design, 5.	

MIAMI UNIVERSITY.

First Year.	*Second Year.*
Psychology, 3.[3]	History of manual arts, 2.
English composition, 3.	School organization, 3.
Mechanical drawing, 2.	Teaching and observation, 2.
Woodworking, 3.	Cabinet making, 3.
Object drawing and design, 1.	Constructive design, 1.
Trigonometry, 3.	Descriptive geometry, 2.
	Industrial arts elective, 2.
Principles of teaching, 3.	
English composition, 3.	Organization and administration of vocational education, 3.
Mechanical drawing, 2.	Observation and teaching, 2.
Woodworking, 3.	Special methods, 3.
Object drawing and design, 1.	Cabinetmaking, 2.
Shop mathematics, 3.	Constructive design, 1.
	Descriptive geometry, 2.
	Industrial arts elective, 2.
	Entrance prerequisite: Maturity, special mechanical ability or teaching experience.

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[1] Each year has three terms. Numbers indicate term hours.

[2] Hours per week for 18 weeks.

[3] Semester hours' credit.

VIII.—CLOCK HOURS DEVOTED TO EACH SUBJECT.

Number of clock hours devoted to each subject in certain institutions.

Subjects.	Oswego (N. Y.) Normal School.	Indiana State Normal School.	West Tennessee Normal School.	Bradley Institute.	Illinois State Normal University.	Northern Illinois Normal School.	Ohio University, Athens.	Miami University.	University of North Dakota.	Iowa State Teachers College.	University of Missouri.	Oshkosh Normal School.	Stout Institute.
ACADEMIC SUBJECTS.													
English:													
Composition		120	48	120	60	72	54	108	108	60		108	60
Literature			96						72				
Matriculation lectures									18				
Science:													
Elementary natural science	100												
Biology			48										
Physics							60						
Mathematics:													
Algebra						60							
Trigonometry								54					
Shop mathematics	100							54				90	
Solid geometry					60	60							
Arithmetic						48							
Descriptive geometry								72					
History:													
Typical industries		60											67½
Industrial history		60			60								
Political economy						60							
Economics			60		60								24
Sociology						60	126						
Electives, from studies listed above		180			60		36		153	150			
Physical training				Elec.				Yes.	Yes.	Yes.			Yes
PROFESSIONAL SUBJECTS.													
Psychology:													
Elementary general	100	60	96	60	(1)	96	54	54	72	120			
Educational			120								72	72	67½
Child study			48		[1] 60								
History of education	50	60		60		60			72	60			
General methods	50	60	60	60	60			54			54		
History of manual arts	100	60	96	60	30		36	36	36	60	18	90	
Organization of manual arts	100	60	48	120		60	18					90	90
Administration of manual arts	100							54			36		
Special methods				180	60			54		36	36		90
Observation										60			
Practice teaching	600	60	60	(3)		240	96	72		114	36	150	270
School administration		96					54						
School management					60		36			60		36	
Principles of education							54						
Education electives									180				
TECHNICAL SUBJECTS.													
Woodwork:													
Elementary	100		180	120	240	360	140	324	180	168	90	180	202'
Cabinet making	100		[1] 180	120	120		144	270		120	216	450	
Turning	100			60	120	60	72		90	48		(1)	
Pattern making	100						72				108		
Carpentry			(1)	60	120		54		[1] 90			(1)	
Finishing				60	(2)	72		(1)					
Upholstery				60									
Metal work:													
Bench work				120									[1] 135
Art metal	100			120	120	120	72				108	90	
Sheet metal				120						60			
Forge	50								126			180	
Machine shop	200						108		126		216		
Foundry	50												

[1] Electives. [2] Twenty lessons. [3] Combined with other courses.

Number of clock hours devoted to each subject in certain institutions—Continued.

Subjects.	Oswego (N. Y.) Normal School.	Indiana State Normal School.	West Tennessee Normal School.	Bradley Institute.	Illinois State Normal University.	Northern Illinois Normal School.	Ohio University, Athens.	Miami University.	University of North Dakota.	Iowa State Teachers College.	University of Missouri.	Oshkosh Normal School.	Stout Institute.
TECHNICAL SUBJECTS—continued.													
Craft work:													
Bookbinding	.....	.....	.....	120	60	120	.....	.....	.....	.....	.....	45	.....
Clay and pottery	.....	.....	.....	.....	120	.....	.....	.....	.....	.....	.....	.....	.....
Leather	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45	.....
Drawing:													
Mechanical	200	.....	180	240	240	360	216	216	90	192	108	180	81
Machine	100	.....	.....	.....	120	.....	.....	.....	180	.....	.....	180	.....
Architectural	.....	.....	.....	120	120	.....	.....	.....	.....	.....	.....	180	[1] 67½
Freehand	.....	.....	.....	120	60	.....	36	.....	.....	60	180	180	.....
Design	100	.....	.....	240	60	60	.....	108	.....	60	.....	.....	.....
Blackboard	.....	.....	.....	.....	60	.....	.....	.....	.....	.....	.....	.....	.....
Woodwork design	.....	.....	.....	120	120	.....	36	108	[1] 90	.....	.....	.....	.....
Printing	200	.....	.....	.....	.....	360	.....	.....	.....	.....	.....	.....	([1])
Paper and cardboard	144	.....	.....	.....	60	.....	.....	.....	.....	60	.....	.....	67½
Construction material	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	90	.....
Forestry	.....	.....	.....	.....	.....	.....	[1] 36	.....	.....	.....	.....	.....	.....
Electives, from studies listed above.	.....	180	.....	.....	.....	.....	.....	108	.....	120	.....	1,360	375

[1] Electives.

IX.—NATURE AND SCOPE OF VARIOUS SUBJECTS.

The following quotations from statements published in the catalogues of the institutions noted are given to indicate the nature and scope of the instruction in certain subjects.

HISTORY OF EDUCATION.

A study of the evolution of educational ideals, with special attention to the work of such reformers as have distinctly influenced modern educational practice. A limited study of educational classics is included.

(2 semester hours' credit, Peru (Nebr.) Normal School.)

A thorough and somewhat critical study of educational theory and practice from primitive days to the present time. Great educational movements rather than men engage the attention. The course seeks to trace the development of thought-life and civilization.

(4 hours' credit, University of North Dakota.)

A study of educational conditions and theories of ancient and mediæval times. Special attention devoted to contributions of Locke, Comenius, Rousseau, Pestalozzi, Herbart, and Froebel. Detailed study of educational leaders of nineteenth century. History of education in the United States emphasized during latter part of course.

(1 term, 60 hours, St. Cloud (Minn.) Normal School.)

Educational ideals, ancient and modern; education as related to civilization, educational classics, special educational conditions, national systems of education, current educational problems in the light of the experiences of the past.

(5 term hours, Iowa State Teachers College.)

General survey emphasizing factors contributing to an intelligent conception of present conditions. A typical oriental country, Greece and Rome; early Christians; Middle Ages, Renaissance; Bacon, Comenius, Locke, Rousseau, Pestalozzi, Froebel, Herbart, Spencer, Mann, and modern reformers. Development of schools since renaissance, modern systems, present-day tendencies.

(5 semester hours, Trenton (N. J.) Normal School.)

Introduction to education. An elementary course dealing with general educational problems and scientific methods of solving those problems. Reports on observations in schools required of each member of the class.

(1 major, University of Chicago.)

The aim of this course is to discover causes and trace out important courses of educational development in the past as a basis for the study of present educational problems. (1 major, 60 class hours, Bradley Institute.)

PSYCHOLOGY.

Two terms are devoted to the elements of the subject from the educational point of view. (De Kalb (Ill.) Normal School.)

Essential facts and fundamental laws of human behavior; foundation courses for junior and senior courses in the subject. Topics, physiological basis of education; sensations, perception, association, attention, apperception, memory, imagination, instinct, habit, judgment, emotions, and will.

(Followed by courses in applied psychology and history of education, or by applied psychology and practice teaching. (1 unit, 5 term hours for each course,
Sam Houston Normal Institute, Huntsville, Tex.)

The chief topics presented are the physical basis of intellect, character, and skill: The nervous system; sources of human behavior; original tendencies and their modifications; laws and conditions of learning; individual differences; their causes and treatment; measuring results in education; genetic psychology—characteristics, mental and physical, of different stages of child development, scientific method of child study which every teacher should practice.

(10 semester hours, Trenton (N. J.) Normal School.)

Descriptive, historical, analytic; simple experiments without elaborate apparatus; nervous system, the senses, the intellectual powers. Emotion, volition, the esthetic judgment. Lectures, texts, themes, reports, and reviews.

(10 term hours, Iowa State Teachers College.)

The nature of experience; how we gain experience; the nervous system as a machine; forms of reaction; the processes of the conscious life; the use of the conscious process in construction; notions derived from the muscular sense; motor image in construction; importance of true perception in construction; typical judgment in design, mechanical drawing, bench work, forge work, foundry, machine work. Association of ideas, complex ideas; inductive and deductive thinking; application of organized ideas to construction; working according to definite plan; geometry of tool grinding; function of sketch, working drawing, model; mental element in economy of construction, skill, and efficiency; nature of the construction lesson; handling children in the construction class.

(4 semester hours, Oshkosh (Wis.) State Normal School.)

A course in general psychology given with special reference to education and teaching. Discussion, reading, and written work.

(1 major, 60 class hours, Bradley Institute.)

This work is limited to a consideration of principles, fundamental in character, and to the application of these principles in the actual work of teaching. Time does not permit the study of psychology as a cultural subject. Special attention is given to the psychology of attention, habit, and will. Those principles of pedagogy are considered which may be shown to have a practical application in the teacher's work. Practical exercises are given throughout the course requiring a conscious application of the psychological and pedagogical principles studied.

(45 minutes daily, 18 weeks, Stout Institute.)

HISTORY OF MANUAL TRAINING.

An extensive study of the development of the manual arts, trade, and industrial education. A brief review of the educational theory of Pestalozzi, Froebel, and other educators. Attention is given to the early apprentice system, guild, manual labor movement, colonial poor laws, Russian and Swedish systems, manual training movement, industrial arts and vocational education, including a study of the Indiana and Federal vocational legislation.

(1 term credit, 12 weeks' course, Indiana State Normal School.)

A study of the place of manual training in education; its relation to the social and psychological life of the child; its place in the curriculum; history of development of manual arts both in Europe and United States.

Lesson plans, observation practice teaching under criticism.

(4 periods weekly, 2 terms, West Tennessee Normal School.)

These courses deal with the history of manual training in the public schools, in relation to the curriculum; manual training systems, courses of study; analysis and presentation of problems in construction, and other questions of importance to the teacher of manual training.

(5 and 3 hours' credit, two terms, Iowa State Teachers College.)

Early educational history; Pestalozzi, effects of his work; education in Germany, France, and England with reference to industrial education and manual training; Della Vos and the Russian system of manual training; Cygneaus, Salamon, and the sloyd movement; beginning and development in the United States; industrial education in the United States and abroad; legislation pertaining to industrial education; comparison of trade, vocational, and technical schools; sources of literature bearing on this phase of public school work.

(3 single periods weekly for 20 weeks,
Kansas State Manual Training Normal School.)

The history of manual training in our own and foreign countries; the sloyd system; the Russian system; trend of manual training, its weakness and strength; how to avoid the weaknesses and build up its strength; point of view in industrial and vocational education; part-time, cooperative, trade, night, and continuation schools.

(3 semester credit hours, Ohio State University.)

The emphasis is placed upon the historical development of industrial education; studies of a specific type of schools, their purpose and organization, and the vocational guidance movement. (45 minutes daily, 18 weeks, Stout Institute.)

The course treats of the purpose, history, organization, and promotion of industrial education and its articulation with the traditional school system and industry.

(1 major, 4 periods weekly, 12 weeks, University of Chicago.)

A brief review of the educational theory and practice of Pestalozzi, Froebel, and other educational reformers; educational handwork in European countries; development of manual training, art instruction, and industrial education in the public schools of the United States; present-day problems relating to the manual arts in both general and vocational education.

(1 major, 5 periods weekly, 12 weeks, Bradley Institute.)

The development of our present manual training work is traced from the time of early European education, showing how it has been influenced by the work of various educators and educational movements in different countries.
(One-half credit, 5 recitations weekly for six weeks, Kent, Ohio, State Normal College.)

A study of the educational conditions that led to the manual training movement and its development. Outside reading, written reports, lectures, and open discussions of problems that arise in organizing the work.
(2 semester hours, Ohio University, Athens, Ohio.)

Evolution of historic manual arts movements in Europe and America.
(1 semester hour, University of Missouri.)

A study is made of the history of the manual training movement in Europe and its development in the United States with reference to its bearing on present problems.
(1 semester hour, University of North Dakota.)

The manual training and industrial education movement.
(2 semester hours, University of Wisconsin.)

This course follows the efforts of the educational reformers in Europe in introducing the manual arts into the schools. The theory and practice of Comenius, Rousseau, Pestalozzi, Fellenberg, and others are reviewed, followed by a study of the more successful work in modern times of Cygneaus, Salamon, and Della Vos. The history of the manual arts in the United States and the development by the various movements which have produced educational and vocational courses will be followed carefully.
(Minor, or one-half credit, Illinois State Normal University, Normal.)

A brief history of the development of industrial education, including the present status; theory, educational, social, and economic; courses of study: administration of manual training and vocational school work; types of vocational schools—prevocational, trade continuation, cooperative, technical high, vocational guidance.
(3 semester hours, Pennsylvania State College.)

History of manual training will be given the first quarter.
(5 term hours, 12 weeks, Northern Normal and Industrial School, Aberdeen, S. Dak.)

The history and development of the practical arts in education, including the manual arts, home economics, industrial education, and vocational guidance. Brief reference to attitude of ancient nations toward the practical in education, emphasis placed on educational reformers; consideration of modern tendencies in education.
(3 semester hours' credit, Miami University.)

A general course covering a brief history of the development of industrial and vocational education in Europe and America. Detailed study of typical examples of vocational education in the elementary and secondary field, including the problem of vocational information or direction. Especial attention to Iowa conditions.
(2 semester hours, State University of Iowa.)

X.—PRACTICE TEACHING.

The results of an inquiry concerning facilities for practice teaching and the character of supervision available in certain institutions may be summarized as follows:

1. Pupils in classes taught by practice teachers come from:
    - (*a*) Model or training schools in 12 cases.
    - (*b*) Public schools not connected directly with the normal school or college in 10 cases.
    - (*c*) From both model school and the public school in 6 cases.
    - (*d*) Private school in 5 cases.
    - (*e*) *Parochial school in 1 case.*

2. Teaching of class goes on:
    - (a) In the training or model school shop in 16 cases.
    - (b) In the public school in 8 cases.
    - (c) In both (a) and (b) in 4 cases.
3. Teaching is done under supervision of:
    - (a) Training school supervisor, 3 cases.
    - (b) Head or member of manual arts department faculty, 21 cases.
    - (c) City supervisor of manual training, 6 cases.
4. Course of study, equipment, supplies, etc., under direction of:
    - (a) Department of manual arts, 18 cases.
    - (b) Department of education, 7 cases.
    - (c) City supervisor, 4 cases.
5. Practice teaching is done in one or more lines of work:
    - (a) One line, 2 cases.
    - (b) Two lines, 10 cases.
    - (c) Three lines, 4 cases.
    - (d) Four lines, 1 case.
    - (e) Six lines, 1 case.
    - (f) Eight lines, 1 case.

Of the lines of work in which practice teaching is done, benchwork in wood is most commonly found. Next in order are mechanical drawing, wood-turning, and lastly the common branches.

6. Number of lessons actually taught:
    - (a) 12 in 1 case.
    - (b) 24 in 3 cases.
    - (c) 36 in 4 cases.
    - (d) 40 to 60 in 4 cases.
    - (e) 90 to 96 in 2 cases.
    - (f) 112, 126–180 in 1 case.
7. Recognition of teaching experience for credit in substitution for practice teaching:
    - No, 17 cases.
    - Yes, 3 cases.
    - Partial, 1 case.
    - Upon examination, 2 cases.
8. Character of lesson plan prepared by student:
    - Outline, 3 cases.
    - Detailed, 12 cases.
    - Written, 7 cases.
    - Project plan, 2 cases.
9. Observation work.
    - Briefly, 6 to 8, 8 to 10 lessons.
    - One term (12 weeks), 4 cases.
    - One semester (18 weeks), 2 cases.

NOTE.—This observation work is done (a) preparatory to teaching, (b) paralleling methods courses and teaching, (c) subsequent to practice work. Reports concerning value of this feature of the work vary from "none" to "very great."

XI.—TYPICAL THREE-YEAR COURSES OF STUDY.

The following outlines are arranged to show the number and nature of the subjects included in three-year courses offered in two institutions. The numeral following a subject indicates hours per week.

OSHKOSH (WIS.) NORMAL SCHOOL.

First Year.

Psychology	2
English composition	3
Mechanical drawing	10
Wood work and wood turning	10
Forging	10
Freehand drawing	2
Applied design	5
Psychology	2
English composition	3
Mechanical drawing	10
Cabinet making	10
Pattern making	2
Foundry practice	10
Freehand drawing	2
Applied design	5

Second Year.

History of manual training	5
Courses of study	5
School management	2
Practice teaching	3
Advanced cabinet making	15
Crafts and applied design	5
Vocational mathematics	5
Organization of manual training	5
Practice teaching	3
Machine shop	15
Craft work	5
Mechanical drawing and machine design	6
Construction and details	6
Ten weeks commercial shop experience.	

Third Year.

Prescribed:

Literature and themes	5
History of typical industries	5
Chemistry and physics of typical industries	10

Electives:

Seven (7) hours of class work daily, from the following—

- Mathematics.
- History.
- Physics.
- Chemistry.
- Manual arts.

BRADLEY POLYTECHNIC INSTITUTE.

First Year.

History of education	5
Wood work	10
Mechanical drawing	10
Metal work	10
English composition	5
Wood finishing	10
Upholstery	10
Freehand drawing	10
Sheet metal work	10
Psychology	5
Carpentry, or wood turning	10
Mechanical drawing	10
Art metal work	10

Second Year.

Vocational woodwork or metal work	20
Agricultural drafting or machine drafting	10
Vocational woodwork or metal work	20
Economic history	5
Architectural drafting or machine drafting	10
Pattern making	10
Vocational wood work or metal work	20
Architectural drafting or machine drafting	10

Third Year.

History of manual arts	5
Teaching mechanical drawing	5
Design	10
Teaching woodwork	10
Vocational woodwork or metal work	10
Teaching manual arts	5
Design or wood carving	10
Woodwork design	10
Wood or metal shopwork	10
English composition	5
Furniture making	10
Organization of manual arts	10

XII.—FOUR YEAR CURRICULA LEADING TO THE B. S. DEGREE.

The following outlines are arranged to show the number and nature of the subjects included in the four-year courses offered in typical institutions:

OHIO STATE UNIVERSITY.

First year.

First semester.	Hours.	*Second semester.*	Hours.
English	2	English	2
Mathematics	3	Mathematics	3
Art	1	Art	2
Art	2	Shopwork	2
Engineering drawing	4	Engineering drawing	3
Foreign language	4	Foreign language	4
Physical education	1	Physical education	1
Military drill	1	Military drill	1

Second year.

English	3	English	3
Foreign language	4	Foreign language	4
Psychology	3	Psychology	3
Shopwork	3	Shopwork	3
Shopwork	2	Shopwork	2
Military drill	1	Military drill	1
Elective	2 or 3	Elective	2 or 3

Third year.

Chemistry or physics	4	Chemistry or physics	4
Sociology	3	Sociology	3
Psychology	2	Psychology	2
Manual training	2	Manual training	2
Shopwork	3	Shopwork	3
Elective	2 to 4	Elective	2 or 4

Fourth year.

First semester.	Hours.
History of education	3
Manual training	3
Principles and practice	3
School administration	3
Elective	3 to 6

Second semester.	Hours.
History of education	3
Manual training	3
Principles and practice	3
Elective	6 to 9

STOUT INSTITUTE.

First year	Hours.
Shopwork and drawing	20
Psychology	5
English composition	5
English, directed readings	1
American history	5
Military drill	R
Gymnastics	R
Total	36

Second year.	Hours.
Shopwork and mechanical drawing	20
Organization of industrial arts	2
Teaching industrial arts	3
Observation and practice teaching	4
English, directed reading	2
Public speaking	2
Hygiene and sanitation	1
Citizenship	2
Military drill	R
Gymnastics	R
Total	36

The 20 hours of shopwork in the first year will be in three or more of the following subjects, to be determined by the director:

Elementary woodwork.
Carpentry.
Bricklaying.
Mechanical drawing.
Electrical work.
Wood turning.
Plumbing.
Printing.
Architectural drawing.
Sheet-metal work.

The 20 hours of shopwork in the second year will be in three or more of the following subjects, to be determined by the director:

Millwork.
Wood finishing.
Forging.
Machine work.
Gas engines and automobile repairs.
Cabinetwork.
Pattern making.
Foundry work.
Machine drawing.

Third year.	Hours.
Shopwork, drawing, and design	10
Advanced psychology	2
Vocational education	2
English	3
Modern history	3
Modern industries	2
Mathematics	4
Sociology	3
Physics	5
Total	34

Fourth year.	Hours.
Shopwork and drawing	10
Administrative problems	2
Strength of materials	3
Industrial chemistry	4
Economics	5
English	2
Industrial history	3
Principles of education	3
Thesis	2
Total	34

The hours indicated are semester hours required. One hour of recitation or two hours of shop or laboratory work, with such outside preparation as may be necessary once a week for 18 weeks, constitute a semester hour.

The 10 hours required shopwork and drawing in the third year and 10 hours in the fourth year will be a continuation of the shopwork in the first and second years.

In the fourth year five hours of additional shopwork may be substituted for the same number of hours of other work, when approved by the director.

MIAMI UNIVERSITY.

First year.

First semester.	Hours.
Object drawing and design	1
Mechanical drawing	2
Psychology	3
Rhetoric and composition	3
Woodworking	3
Trigonometry	3
Physical education	1

Second semester.	Hours.
Object drawing and design	1
Mechanical drawing	2
Psychology	3
Rhetoric and composition	3
Woodworking	3
Shop mathematics	3
Physical education	1

Second year.

First semester.	Hours.	*Second semester.*	Hours.
General chemistry	4	General chemistry	4
Constructive design	1	Constructive design	1
Descriptive geometry	2	Descriptive geometry	2
History of manual arts	3	Cabinetmaking	3
Cabinetmaking	3	Pattern making	2
Wood turning	2	Physical education	1
Physical education	1	Elective	3

Third year.

First semester.	Hours.	*Second semester.*	Hours.
Architectural drawing	3	Topographical drawing	2
Principles of teaching	3	Special methods in industrial arts	3
Paper and cardboard construction or sheet-metal work	2	Bookbinding or art metal work	3
Concrete construction	2	Frame building construction	2
Physics	4	Physics (freshman)	4
Sociology	3	Sociology	3

Fourth year.

First semester.	Hours.	*Second Semester.*	Hours.
Machine design	2	Pottery or printing	2
Pottery or printing	2	Bench metal work	2
Forging	2	Organization and administration of vocational education	3
Teaching industrial education	3	Sociology in rural communities	3
Labor problems	3	Teaching industrial education	3
School organization in secondary schools	3		
Machine design	3		

Students in industrial education are advised to spend one or more summers during their course in practical work in the industries. The demand for teachers who have had industrial work in commercial shops is increasing each year.

The students may make any one of the following combinations with the course in industrial education: Industrial education and (*a*) mathematics, (*b*) physics, (*c*) agriculture, or (*d*) physical education.

UNIVERSITY OF WISCONSIN.

First year.

First semester.	Hours.	*Second semester.*	Hours.
English	3	English	3
Language or science and mathematics	3-5	Language, or science and mathematics	3-5
History or mathematics	3	History or mathematics	3
Drawing (freehand or mechanical or both)	3-6	Drawing (freehand or mechanical or both)	3-6
Electives	3	Electives	3
Total	15-17	Total	15-17

Second year.

First semester.	Hours.	*Second semester.*	Hours.
Language or science and mathematics	3-5	Language or science and mathematics	3-5
History or mathematics	2-5	History or mathematics	2-5
Drawing (if not taken in freshman year)	3	Drawing (if not taken in freshman year)	3
Manual arts:		Manual arts:	
Freehand drawing (advanced)	3-6	Industrial arts design	3-6
Elementary woodwork		Advanced woodwork	
Wood turning		Wood finishing	
Care of machines		Pattern making	
Electives	4-6	Electives	4-6
Total	15-17	Total	15-17

Third year.

First semester.

	Hours.
Psychology, history, or mathematics	2–5
Education	2–3
Manual arts:	
Public school drawing practice	5–7
Decorative metal	
History and applied design	
Design seminary	
History and literature of manual arts	
Organization and administration	
Industrial shop courses	
Clay and pottery	
Electives	4–7
Total	15–17

Second semester.

	Hours.
Psychology, history, or mathematics	2–5
Education	2–3
Manual arts:	
Public school drawing methods	5–7
Public school, drawing practice	
Decorative metal	
History and applied design	
Design seminary	
Vocational education and guidance	
Industrial shop courses	
Clay and pottery	
Electives	4–6
Total	15–17

Fourth year.

First semester.

	Hours.
Thesis	2
Education	3–4
Manual arts:	
Clay and pottery or decorative	8–11
Metal (advanced)	
Design seminary	
Illustration	
Teaching and supervision	
Seminary in manual arts	
Observation and practice teaching	
Industrial shop courses	
Electives	3
Total	13–17

Second semester.

	Hours.
Thesis	2
Education	3–4
Manual arts:	
Clay and pottery or decorative metal (advanced)	8–11
Design seminary	
Illustration	
Teaching and supervision	
Primary handwork	
Seminary in manual arts	
Special methods	
Industrial shop courses	
Electives	3
Total	13–17

General summary of requirements.

	Hours.
English	6
Language, or science and mathematics	20
History	10
Psychology and education	10–18
Drawing	9–12
Manual arts	32–40
Electives	10–33
Major: Minimum	40
Minor: Minimum	17

UNIVERSITY OF MISSOURI.

Department.	Course number.	Course title.	Hours credit, semester— I.	Hours credit, semester— II.
FRESHMAN YEAR.				
English	1a or 1b	English composition and rhetoric	3	3
History	1a	European history	5	
Manual arts	1a or 7a	Woodwork	2	
Manual arts	1b or 7b	Mechanical drawing		2
Physical education or military science.	1	Physical training	0	0
Foreign language		Elective	5	5
Physical science		Elective		5
			15	15
SOPHOMORE YEAR.				
Mathematics	3a	Trigonometry	5	
Sociology	1a	Elementary sociology	5	
Preventive medicine	1b	Preventive medicine		2
Manual arts	2a	Metalwork	2	
Theory and practice of art	2b	Introduction to art		5
Education	102a	Educational psychology	4	
Biology science		Elective		5
Elective				3
			16	15

UNIVERSITY OF MISSOURI—Continued.

ment.	Course number.	Course title.	Hours credit, semester—	
			I.	II.
YEAR.				
	3b	Pattern making		2
	4a and 14b	Machine work	2	2
	5a	Tools, materials, and shop practice	1	
	8a	Machine drawing	3	
ing	4a	Architectural drawing	2	
	120	History of education	2	2
	130a	Theory of teaching	3	
	140b	Teaching of manual arts		2
	190b	Elementary millwrighting		1
			2	6
			15	15
YEAR.				
	160b	School economy		2
	165a	Administration of manual arts	2	
	180	Practice teaching	3	3
	180b	History of manual arts		1
tion			1	
			9	9
			15	15

PENNSYLVANIA STATE COLLEGE.

First year (in engineering).

First semester.	Credits.	*Second semester.*	Credits.
etry	3	General chemistry	6
	3	Mechanical drawing	3
g	1	Modern language	3
	5	Analytic geometry	5
l gymnasium	2	Military drill and gymnasium	1
	3	Argumentation	3
d metal work	1	Woodworking for elementary schools	1
elementary schools	2		

Second year.

ing	1	Modern language	3
	3	Design	2
	2	Shop problems	3
	2	Wood turning	2
hinery	2	Industrial materials	2
l design	3	Elements of machinery	2
	1	Military drill	1
eat	3	Oral composition or English literature	3
sition	3		
ing	1		

Third year.

s	2	Principles of education	3
ion	3	American economic history	3
history	3	Art metal work	2
	1.5	Industrial materials	2
actice	1	Machine-shop practice	2
anization	3	Furniture construction	2
study	1	Practice teaching of woodwork	1
	3	Logic	3
	3	Electives	2

Fourth year.

omics	3	Secondary education	3
d management	3	Thesis	2
	2	Organization and equipment of industrial education	2
ustrial education	3	Clay and cement work	2
of wood turning	1	Practice teaching of pattern making	1
of forging	1	Vocational woodwork or Vocational metal work	3
work or work	3	Municipal government	3
or	11	Electives	3
ement	3		

INDIANA STATE NORMAL SCHOOL.

First term.	*Second term.*	*Third term.*
	Freshman Year.	
Shopwork.	Shopwork.	Shopwork.
*Mechanical drawing.	*Freehand drawing.	*Mechanical drawing.
*Applied arithmetic.	*Applied algebra.	*Applied geometry.
English.	English.	English.
	Sophomore Year.	
Shopwork.	Shopwork.	Shopwork.
*Mechanical drawing.	History of education.	History of education.
*Applied trigonometry.	*Mechanics.	*Typical industries.
Psychology.	Psychology.	†Vocational psychology.
	Junior Year.	
Shopwork.	Shopwork.	Shopwork.
*Architectural drawing, or *Machine design.	*Architectural drawing, or *Machine design.	*Architectural drawing, or hygiene and sanitation.
General chemistry.	General chemistry.	*Applied chemistry.
*Industrial history.	Economics.	Economics.
	Senior Year.	
Shopwork.	Shopwork.	Shopwork or wood finishing.
*Constructive design.	Installation of machinery.	†Special methods in teaching shop subjects.
*Applied chemistry.	*Applied physics.	*Applied physics.
†Theory of industrial and vocational education.	†Organization and management of shop courses.	†Practice teaching.

BRADLEY POLYTECHNIC INSTITUTE.

I. The following curriculum gives a broad view of the manual arts field, as well as considerable emphasis to general education. It is designed for teachers, who will be expected to offer a combination of academic and technical subjects. Upon consultation with the adviser, students will choose their electives in such a manner as will prepare them for teaching one or more high-school academic subjects in addition to manual arts.

The curriculum includes three main divisions: (1) Required technical subjects, 16 majors; (2) required general and professional subjects, 22 majors; (3) electives, 10 majors.

The electives are taken in the second, third, and fourth years, from the following subjects:

Biology.
Chemistry.
Education.
English.
History.
Languages.
Mathematics.
Physics.
Coaching athletics.

---

*Approved related technical subjects, in which 12 credits are required.

†Special professional subjects, in which 5 credits are required. Students should consult with the head of the department of industrial arts as to the required 12 shop credits and the order in which they should be taken up each term, who will outline the work by terms according to the particular needs of each student. Individual programs will be made for those who enter upon the course with advanced standing and for those who, for good reason, find it impracticable to follow the course term by term as outlined. Special programs will also be made for students who may be in attendance during the summer quarters. Students enrolling in the industrial arts course or any of the special vocational courses are strongly urged to observe carefully the suggested outlines in planning each term and year's work, especially the prescribed work, and under no circumstances to permit the required subjects to accumulate for the latter part of the course.

The remainder of the curriculum is as follows:

	Technical subjects.	*General and professional subjects.*
First year.	Mechanical drawing. Freehand drawing. Woodworking. Forging. Sheet metal work. Art metal work.	English composition. Economic history. Shop mathematics. Physical training.
Second year.	Architectural drawing. Theory of design. Machine drawing. Pattern making.	Chemistry. Mathematics. Physical training.
Third year.	Interior decoration. Woodwork design. Furniture making.	Physics. Psychology. History of education. Advanced English composition. Physical training.
Fourth year.		History of manual arts. Equipments. Administration of manual arts. Vocational guidance. Social science. Teaching manual arts. Teaching mechanical drawing. Teaching woodworking. Practice teaching.

II. A curriculum giving special emphasis to technical courses and related science and mathematics for the preparation of teachers of drafting in the larger city high schools and vocational schools.

	Required technical, 27 majors.	*Required general and professional, 22 majors.*
First year.	*Mechanical drawing. Free-hand drawing. Woodworking. Forging. Sheet metal. Art metal.	English composition. Economic history. Shop mathematics. Physical training.
Second year.	Pattern making. Foundry. Woodworking machinery. Machine shop (one major) Free-hand drawing.	Chemistry (two majors). Mathematics. Descriptive geometry. Physical training.
Third year.	Architectural drafting. Machine design. Machine shop (one major).	Physics 2. Psychology. History of education. Advanced English composition. Physical training.

---

* Shop, drawing, and science; double periods daily.

Required technical, 27 majors.	*Required general and professional, 22 majors.*
Fourth year.	
Theory of design.	History of manual arts.
Architectural drafting.	Equipments.
Machine drawing.	History of architecture.
Furniture making.	Social science.
	Teaching manual arts.
	Teaching mechanical drawing.
	Practice teaching.

Other curricula offered at Bradley Polytechnic Institute include the following, four years in length:

1. A curriculum designed for teachers in (*a*) junior high schools, (*b*) agricultural high schools, and (*c*) automobile repair, giving opportunity for electives from the available technical courses, enabling the teacher to specialize in automobile repair, or to prepare to teach from two to four lines of industrial work.
2. A curriculum for prospective teachers of woodworking in technical high schools and vocational schools.
3. A curriculum emphasizing technical work in shop practice, related drawing, mathematics, and science for teachers of metal working in the larger city high schools and vocational schools.
4. A curriculum for prospective supervisors and administrative officers of industrial education. Candidates must present evidence of (*a*) two years of approved study in manual arts and academic courses in college or normal school, (*b*) general fitness for supervisory work, and (*c*) actual teaching experience in technical subjects.

XIII.—THE GENERAL PROBLEM.

A study such as this shows considerable variation in the subjects actually included in the curricula set up for prospective teachers. There is, however, a growing tendency toward a common standard, and the two-year courses are coming to have many elements in common both as to subject matter and methods of procedure. For example, in many institutions the stock subjects in education, such as psychology and history of education are treated in much the same way. English composition, woodworking, and mechanical drawing are likewise treated much alike by the various schools. Practice teaching varies considerably as to character, length of time required, and conditions under which the teaching is done. State legislation is taking hold of this matter, and greater emphasis is certain to be placed upon this phase of the teacher's preparation.

One tendency in the field of general education is becoming noticeable in the special field under consideration. More and more the two-year normal graduate is finding his field of work in the grammar grades or the smaller high schools, while the teachers for the larger high schools are being trained at the colleges and universities in increasing numbers. It is to be expected, therefore, that high-school positions will be held generally by men with the training represented by the bachelor's degree, while the normal-school graduate more often is located in the elementary school. This tendency toward four-year programs is naturally moving more rapidly in the colleges and universities than in the normal schools, where the facilities for offering a four-year program do not exist. A study of tle four-year plans outlined on the foregoing pages shows the most recent developments.

The universities usually administer these courses either (1) in the college of education, thus making use of the model (high or elementary) school facilities, or (2) in the college of engineering, utilizing the engineering shops.

In the former case the institution is apt to place much emphasis upon education courses and such work as usually receives consideration in the average college course, thus giving a meager opportunity for actual shop practice. The latter oganization places the emphasis upon engineering courses in science and mathematics, which very often are theoretical and unrelated to the work in hand. In neither case is prime consideration given to the man being trained, with reference to his having, or acquiring, the skill required as the basis for effective teaching.

The supply of qualified teachers will not meet the demand for some time to come, because (1) the number needed is rapidly increasing and (2) the means of preparation are limited; again, the conception of what these teachers should be is not yet clear to many school executives. An analysis of the problems must make evident the need of one with *ability to teach the things he himself can actually do*. This means that he can not be an individual, school trained, exclusively, whose knowledge and skill in shop courses are such that skilled workmen will not consider it of value. The requirements laid down by the Smith-Hughes Act for the qualifications of teachers make impossible the continued employment of teachers whose preparation does not include sufficient practice in the line of work to be taught to give him the degree of skill, resourcefulness, and knowledge possessed by a workman of journeyman rank.

On the other hand, this law has opened up a new danger in that many school officials are swinging to the opposite extreme in their belief and practice concerning teachers for technical work. It is becoming all too common to "pick up" a mechanic from the trades, whose only merit may lie in the fact that he draws a skilled-workers wages. With the specialization of modern industry, and the haphazard method of securing employment as a mechanic, it is not an easy matter to find by the most diligent search a man of the type represented by the old master workman who taught his trade to one or more apprentices. Having found this man, we still have the problem of training him to be an effective teacher with the spirit, the point of view, and the attitude toward education, toward industry, and life in general which we need in leaders of boys and young men.

If the school has not succeeded in properly preparing its prospective teachers on the technical side, it is equally true that industry organized for the production of articles of commercial value can not at the same time produce teachers for the schools of the nation. Clearly, then, there must be a new attempt at a solution of the problem. Several of the four-year curricula given in this paper are recent attempts of this kind.

The program of the State College of Pennsylvania is clearly the result of an engineer's analysis of the problem, and the curriculum has many elements in common with the engineering curricula of that institution. The Stout Institute program is a recognition of the junior high-school movement, and as such is most appropriate in its service to these high schools becoming common throughout the country. As a rule the university programs (Wisconsin and Missouri) cover in brief fashion a variety of shop and drawing courses, with an insufficient amount of time spent upon any one line to make more than a mere novice of the student. The programs at Bradley Institute have been developed with the kind of positions open to the graduate in mind. Since an adequate supply of competent men can not be had from industry, and those that do come are not ready to teach, greater emphasis is placed upon technical work of a practical character. On the other hand, there is a body of subject matter of general and professional character which should be common to any course.

Finally, there is no valid reason why teacher-training courses for the technical subjects should not be made up of elements selected because of their contribution to the end or ideal in mind. This means that tradition need not be followed slavishly in organizing the plan. There is surely no reason why two years of foreign language should be made part of the requirement when the time may be spent to greater advantage on lines of work directly contributing to effective teaching.

A report such as this is not the place to theorize at length, yet the student of catalogues and announcements of curricula can not escape the feeling that teacher-training institutions need to make a more thorough analysis of the work industrial teachers must do and to arrange curricula which directly and specifically fit individuals for their work. Only by such procedure can an adequate supply of teachers who know their subject and who can teach what they know to others be assured for the schools now established and for those sure to be needed in the near future.

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

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KINDERGARTEN SUPERVISION IN CITY SCHOOLS

By

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BUREAU OF EDUCATION

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LETTER OF TRANSMITTAL.

Department of the Interior,
Bureau of Education,
Washington, August 20, 1918.

Sir: In 1914–15 the Bureau of Education made a study of kindergarten training schools, the results of which were published in Bulletin, 1916, No. 5. Following the publication of this bulletin a number of supervisors of kindergartens throughout the United States requested the Bureau of Education to make a study of kindergarten supervision similar to that of training schools. The results are presented in the accompanying report. Study of the material herewith shows that the custom among school officials is to class supervisors of kindergartens with supervisors of special *subjects*, such as music, art, manual training, physical education. This listing implies that the kindergarten is a subject rather than a stage or phase of education. It is hoped that one of the results of the publication of the manuscript transmitted herewith will be to correct this classification by bringing to light the true function of kindergarten supervision, which is that of dealing with teachers and children, not with a subject.

Respectfully submitted.

P. P. Claxton,
Commissioner.

The Secretary of the Interior.

KINDERGARTEN SUPERVISION IN CITY SCHOOLS.

1. INTRODUCTION.

Kindergarten supervision as a distinct department of school organization is just reaching the stage of historic self-consciousness. Little, if any, literature on the subject is discoverable, although the office of supervisor, or inspector, or director, has always been maintained in connection with both public school kindergartens and privately supported kindergartens during the 50 odd years of their existence in the United States.

From the first the form of kindergarten procedure has differed so radically from that of the usual public school that the services of some one specially trained in kindergarten theory and practice were necessary to the success of kindergarten classes; while in the case of a group of kindergartens under the control of an association, it was imperative that a trained kindergartner of maturity and judgment should become responsible to the association for the progress of the children and the maintenance of high standards among the kindergarten teachers, as well as for the practical details pertaining to the housing and equipment of the classes.

In the early days there seems to have been no dividing line between the office of training teacher and that of supervisor. One person performed both functions. Because very few training schools were in operation in the seventies and eighties of the past century, the supply of kindergartners was inadequate to the demand. The introduction of kindergartens into a public school system always involved the problem of procuring trained teachers. Out of the exigencies of the situation grew the custom of engaging a kindergarten director who could give instruction to young women students and also assume general oversight of the kindergartens as fast as they were opened.

According to this arrangement, the morning hours of the students were devoted to practical work with the children; those of the supervisor to visiting and directing the practice in the kindergartens. Two or three afternoons a week the supervisor instructed the students in the theory and manipulation of the kindergarten gifts and occupations, and in the interpretation of Froebel's Mother Play.

The St. Louis arrangement, as described by Dr. W. T. Harris in one of his early reports, was of this type. From 1873 to 1876 Miss Susan Blow had freely given her services as training teacher and supervisor. For the school year 1876–77, Dr. Harris reported:

> Two supervisors have been appointed, Mrs. C. J. Hildreth and Miss Cynthia P. Dozier, who inspect the kindergartens and make weekly reports to the superintendent, give weekly lectures to the assistants, besides conducting each a kindergarten.

In a series of articles entitled, "Leaves from the Notebook of a Supervisor," Miss Dozier herself gives an interesting account of the experiences of those early days.[1]

In a later report of the kindergartens in St. Louis, Dr. Harris made this comment:

> In order to make it worth while for volunteers to join the system, as well as to secure the development of the salaried teachers, it is necessary to have two persons of superior ability who can give instruction once a week on the theory and practice (the gifts and occupations) of Froebel's system.

Another historic sidelight is furnished by a report presented in 1881 by Mr. James MacAlister, superintendent of public schools in Milwaukee, to the executive committee of the board of education, relative to the establishment of public kindergartens in that city. In regard to organization, Mr. MacAlister said:

> I beg to suggest that the best mode of organizing the system would be the appointment of a fully competent person to act as director of the kindergarten now in operation at the normal school and chief director of the kindergartens as they are opened throughout the city. It would be her duty to train the assistants, to give the necessary instruction by lecture and otherwise at the normal school kindergarten, and to supervise the work wherever carried on. * * * I need say nothing as to the importance of securing a chief director of ability and education, of thorough knowledge, and an enthusiast in the work. Much will depend on this selection, but I have no doubt a person suited to the duties and responsibilities can be found.

The following year, Miss Sarah A. Stewart was appointed to fill the important post.

Of recent years the steady expansion of systems of public kindergartens, with their correspondingly heavy demands upon the time of the supervisor, and the broadening of kindergarten training courses to meet the new educational requirements, have made it impossible, except in small city systems, for the two offices to be vested in one person. Although the supervisor is no longer of necessity a training teacher, she is still looked upon as a leader in the formation and conduct of study classes attended by graduate kindergarten teachers. This is evidently a survival and extension of the teaching phase of early supervision practices.

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[1] Kindergarten Review, January, February, March, 1909.

In theory, the kindergarten is regarded as an integral part of public school systems, but the existence of an actual gap is revealed by the fact that in city school directories and other publications the supervisor of kindergartens is listed with the supervisor of music, the supervisor of drawing, or the supervisors of other special *subjects.* Such listing undoubtedly serves the convenience of the board of education, but it has the effect of obscuring the true function of kindergarten supervision, which is that of dealing with children (and subjects), not merely with a subject.

2. CITIES HAVING KINDERGARTEN SUPERVISORS.

Of the 307 cities which reported to the Bureau of Education four or more kindergartens, with four or more teachers, 135 have special supervisors for kindergartens and 172 have no special kindergarten supervisor.

Following the usage common to the majority of cities, the terms "supervisor," "director," and "assistant" are used throughout this report to designate, respectively, the officer in charge of the system, the head teacher in a kindergarten, and the assistant teacher.

Table 1 lists the cities having kindergarten supervisors, with the number of kindergartens in each city according to figures for 1916, and the name of the supervisor.

TABLE 1.—*Cities and supervisors.*

Cities.	Kindergartens.	Supervisor.
Birmingham, Ala[1]	23	Agnes M. Wilson.
Mobile, Ala.	9	Elizabeth Johnston.
Bisbee, Ariz	7	Elizabeth Teegarten.
Phoenix, Ariz.	6	Nellie M. Pollock.
Bakersfield, Cal	7	Mary Strickland.
Los Angeles, Cal.	137	M. Madeline Neverka.[2]
Oakland, Cal.	60	Ida Vandergaw.
Pasadena, Cal.	15	Maud Alice Davis.[3]
Pomona, Cal	6	Clara S. Brown.
Redlands, Cal.	5	Daisy D. Virgin.
Sacramento, Cal.	17	Rose M. Sheehan.
Santa Barbara, Cal.	6	Viola M. Gilson.
Denver, Colo.	78	H. Grace Parsons.
New Britain, Conn.	16	Ella A. Fallon.
New Haven, Conn.	50	Jessie Scranton.
New London, Conn.	6	Gertrude L. Stadtmueller.
South Manchester, Conn.	5	Ella Washburn.
Waterbury, Conn.	28	Agnes C. Fitzpatrick.
Washington, D. C.	79	Catherine R. Watkins.
Atlanta, Ga.[4]	27	Willette A. Allen.
Columbus, Ga.	8	Edwina Wood.
Savannah, Ga.[4]	6	Hortense M. Orcutt.
Evanston, Ill. (district 75)	8	Helen G. Dwyer.[5]
Moline, Ill	7	Nellie Anthony.
Peoria, Ill.	19	Lucy Way.
Riverside, Ill[4]	4	Lucia Morse.

[1] Kindergartens temporarily discontinued.
[2] Succeeded Grace Fulmer, 1917.
[3] Resigned, 1916.
[4] Kindergartens under association control.
[5] Resigned, 1917.

TABLE 1.—*Cities and supervisors*—Continued.

Cities.	Kindergartens.	Supervisor.
Crawfordsville, Ind	4	Lula B. Schwin.
Evansville, Ind	24	Belle Coffee.
Fort Wayne, Ind	13	Gail Calmerton.
Hammond, Ind	16	Alta Adkins.
Huntington, Ind	4	Prudence Kenner.
Indianapolis, Ind.[1]	61	Martha B. Criley.
Michigan City, Ind	8	Dorothy Armstrong.
Muncie, Ind.[1]	5	Lillian Mitchell.
South Bend, Ind	16	Mrs. Alma O. Ware.
Terre Haute, Ind	32	Stella Webb.
Vincennes, Ind	6	Claire McCarthy.
Creston, Iowa	4	Theresa Lumbard.
Davenport, Iowa	19	Mrs Abigail O. Sheriff.
Des Moines, Iowa	72	Bessie M. Park.
Fort Dodge, Iowa	6	Miriam Hoover.
Coffeyville, Kans	5	Millie Earle.
Salina, Kans	4	Mrs. Hazel N. Moore.
Covington, Ky	14	Elizabeth Pyle.
Lexington, Ky	7	Lucy Walby.
Louisville, Ky	34	Louise Dietz; assistant, Allene Seaton.
New Orleans, La	43	Frances E. Randolph.
Bangor, Me	8	Nellie E. Brown.
Boston, Mass	143	Caroline D. Aborn; assistant, Lillian Poor.
Cambridge, Mass	17	Alice V. McIntyre.
Fall River, Mass	9	Mabel A. Robertson.
Lowell, Mass	14	Alice T. Lee.
Newton, Mass	13	Adelaide L. Thompson.
Pittsfield, Mass	6	Edith C. Rice.
Springfield, Mass	16	Bertha McConkey.
Worcester, Mass	39	Mrs. Mary H. Barker.
Battle Creek, Mich	12	Mrs. Dessalee R. Dudley.
Bessemer, Mich	5	Electa Ransom.
Crystal Falls, Mich	6	Florence M. Finley.
Detroit, Mich	116	Reginia R. Heller.
Grand Rapids, Mich	70	Annie Blanchard.
Houghton, Mich	4	Anna M. Nye.
Ironwood, Mich	14	Gladys M. Shriver.[2]
Jackson, Mich	14	Lula A. Reed.
Kalamazoo, Mich	18	Mae E. Raymond.
Lansing, Mich	23	Waine Troy.[3]
Midland, Mich	4	Anna O'Donnell.
Muskegon, Mich	10	Caroline A. Sibley.
Chisholm, Minn	4	Clara R. Cook.
Duluth, Minn	34	Ethel I. Salisbury.
Eveleth, Minn	10	Martha Voelker.
Gilbert, Minn	5	Mary E. Buckmaster
Hibbing, Minn	14	Theo. Thurber.
Minneapolis, Minn	87	Julia Wade Abbot.
St. Paul, Minn	67	Mary F. McClellan.
Virginia, Minn	7	Eva R. Sorenson.
Laurel, Miss	6	Janetta E. Howard.
Kansas City, Mo	77	Cora English.
St. Louis, Mo	169	Mary McCulloch.
Lincoln, Nebr	19	Alice M. Cusack.
Omaha, Nebr	62	Mrs. Orietta S. Chittenden.
Concord, N. H	5	Helen L. Southgate.
Atlantic City, N. J	15	Ella J. Hamilton.
Bloomfield, N. J	18	Ida E. Robinson.
Jersey City, N. J	12	Ella J. Richardson.
Kearney, N. J	11	May Robbins.
Newark, N. J	102	Margaret McCloskey.
Perth Amboy, N. J	22	Adelina d'Arvean.
Rutherford, N. J	5	Bertha K. Koehler.
Summit, N. J	4	Lorena Frost.
Trenton, N. J	61	Bertha M. Barwis.
Albany, N. Y	24	Ellen Jones.
Amsterdam, N. Y	7	Ethel Robb.
Binghamton, N. Y	28	Grace E. Rogers.
Buffalo, N. Y	121	Ella C. Elder.
Ithaca, N. Y	4	Edith Marshall.
Lawrence, N. Y	6	Anna S. Van Wyck.
Lockport, N. Y	12	Frances E. Putnam.
New York, N. Y.[4]	956	Fanniebelle Curtis; assistants, Luella A. Palmer, Janet Ni son.

[1] Kindergartens under association control.

[2] Succeeded Florence Padgett, 1916.

[3] Succeeded Hazel Hayden, 1917.

[4] In addition to the public school kindergartens, four other groups in Brooklyn and Manhattan are u the control of associations.

TABLE 1.—*Cities and supervisors*—Continued.

Cities.	Kindergartens.	Supervisor.
Olean, N. Y	13	Clara Ethel Gage.
Schenectady, N. Y	19	Frances Leitzell.
Syracuse, N. Y	61	Maud C. Stewart.
Troy, N. Y	13	Frances T. Neary.
Utica, N. Y	21	Sara E. Nolan.
Cincinnati, Ohio	66	Julia Bothwell.
Cleveland, Ohio	186	Margaret A. Trace.
Dayton, Ohio	40	Anna H. Littell.
Lorain, Ohio	9	
Mansfield, Ohio[1]	7	Mary Ellen Runyan.
Springfield, Ohio	10	Anna L. Barrett.
Toledo, Ohio	76	Lura Whitney.
Guthrie, Okla.[1]	6	Mary Harris.
Oklahoma City, Okla	46	Susan Thompson.[2]
Tulsa, Okla	4	Avis Smith.
Philadelphia, Pa	271	Anna W. Williams.
Pittsburgh, Pa	100	Ella R. Boyce; assistant, Elizabeth Rankin.
Scranton, Pa	30	Elizabeth R. Rice.
Providence, R. I	65	Julia Pepper.
Dallas, Tex.[3]	5	Mary King Drew.
Fort Worth, Tex	17	Sarah W. Crawford.
Houston, Tex	4	Helena Wilson.
Ogden, Utah	8	Verna Tavey.
Salt Lake City, Utah	13	L. M. Qualtrough.
Norfolk, Va.[3]	5	Lilian M. Wadsworth.
Richmond, Va	19	Mary E. Pennell.
Antigo, Wis	6	Amelia Sabin.
Ashland, Wis	6	Lydia Doolittle.
Beloit, Wis	13	Gertrude Morgan.[4]
Fond du Lac, Wis	16	Anna Clark.
Kenosha, Wis	16	Jane E. Vernon.[5]
La Crosse, Wis	10	Irene Harbeck.[6]
Oshkosh	22	Clara James.
Racine, Wis	24	Myrtle Farnham.
Sheboygan, Wis	16	Theodora Arentson.
Waukesha, Wis	8	Meda Newbecker.

[1] Kindergartens temporarily discontinued.

[2] Succeeded Edna Mae Lindsay.

[3] Kindergartens under association control.

[4] Resigned, 1917.

[5] Succeeded Edna E. Hood, 1917.

[6] Succeeded Gwendolyn Fenton, 1917.

3. SUPERVISION IN CITIES GROUPED ACCORDING TO POPULATION.

Of the cities of 250,000 and over, Chicago, Baltimore, Milwaukee, San Francisco, Seattle, and Rochester are without special supervisors of kindergartens. Greater New York employs one chief and two assistant supervisors for the public-school kindergartens. In addition to these, one supervisor is employed by each of the four associations—Brooklyn Free Kindergarten Society, New York Kindergarten Association, Children's Aid Society, and St. Bartholomew's Parish. In San Francisco several groups of free kindergartens are maintained by associations.

Boston and Pittsburgh employ one chief and one assistant supervisor for the public kindergartens. In Detroit and Los Angeles the kindergartens and first grades are under one supervisor; in Denver the kindergartens and first two grades are in charge of one person; and in Jersey city the kindergartens and first four grades are supervised by the same person.

Table 2 indicates the nature and scope of supervision in cities of over 250,000 population.

TABLE 2.—*Supervision in cities of 250,000 and over.*

Cities.	Kindergartens.	Type of supervision.
Los Angeles, Cal	137	One supervisor of kindergartens and first grades.
San Francisco, Cal	11	No special supervisor.
Denver, Colo	78	One supervisor of kindergartens and first two grades.
Washington, D. C	79	One supervisor of kindergartens.
Chicago, Ill	376	No special supervisor.
New Orleans, La	43	One supervisor of kindergartens.
Baltimore, Md	23	No special supervisor.
Boston, Mass	143	Two supervisors of kindergartens.
Detroit, Mich	116	One supervisor of kindergartens and first grades.
Minneapolis, Minn	87	One supervisor of kindergartens.
Kansas City, Mo	77	Do.
St. Louis, Mo	169	Do.
Jersey City, N. J	12	One supervisor of kindergartens and first four grades.
Newark, N. J	102	One supervisor of kindergartens and primary grades.
Buffalo, N. Y	121	One supervisor of kindergartens.
New York, N. Y	936	Three supervisors of kindergartens.
Rochester, N. Y	74	No special supervisor.
Cincinnati, Ohio	66	One supervisor of kindergartens.
Cleveland, Ohio	186	Do.
Philadelphia, Pa	271	Do.
Pittsburgh, Pa	100	Two supervisors of kindergartens.
Providence, R. I	65	One supervisor of kindergartens.
Seattle, Wash.[1]	27	No special supervisor.
Milwaukee, Wis	134	Do.

[1] A supervisor was in charge of kindergartens until 1914, when she withdrew in order to establish a kindergarten training school in Seattle. Her influence and advice are still active factors in the city kindergartens.

Of the cities with a population between 100,000 and 250,000, Bridgeport, Hartford, New Bedford, Camden, Paterson, and Columbus do not employ a special supervisor for kindergartens. In six cities, the kindergartens and primary grades are under one supervisor; and in one of these, Louisville, an assistant devotes her entire time to the supervision of the kindergartens. In Birmingham, Albany, Syracuse, and Fort Worth, the supervisor fulfills also the duties of training teacher in the city normal school.

Atlanta and Dallas have no public school kindergartens; but in each of these cities a kindergarten association is sponsor for several free kindergartens, and maintains a kindergarten training school of which the supervisor has charge. The kindergartens in Indianapolis are under the control of an association.

The situation with regard to the group of cities between 100,000 and 250,000 is set forth in Table 3.

TABLE 3.—*Supervision in cities of 100,000 to 250,000.*

Cities.	Kindergartens.	Type of supervision.
Birmingham, Ala.[1]	23	The supervisor of kindergartens is also head of kindergarten training department in the city normal school.
Oakland, Cal	60	One supervisor of kindergartens and primary grades.
Bridgeport, Conn	4	No special supervisor.
Hartford, Conn	17	Do.
New Haven, Conn	50	One supervisor of kindergartens.
Atlanta, Ga	27	Two supervisors of association kindergartens are also teachers in the training school.
Indianapolis, Ind	61	One supervisor of association kindergartens.
Des Moines, Iowa	72	One supervisor of kindergartens.
Louisville, Ky	34	One supervisor of kindergartens and primary grades, with an assistant giving entire time to the kindergartens.
Cambridge, Mass	17	One supervisor of kindergartens and primary grades.
Fall River, Mass	9	One supervisor of kindergartens.
Lowell, Mass	14	One supervisor of kindergartens and first four grades.
New Bedford, Mass	22	No special supervisor.
Springfield, Mass	16	One supervisor of kindergartens.
Worcester, Mass	39	Do.
Grand Rapids, Mich	70	One supervisor of kindergartens and first grades.
St. Paul, Minn	67	One supervisor of kindergartens.
Omaha, Nebr.[2]	62	Do.
Camden, N. J	26	No special supervisor.
Paterson, N. J	24	Do.
Trenton, N. J	61	One supervisor of kindergartens.
Albany, N. Y	24	The supervisor of kindergartens is also head of kindergarten training department of city normal school.
Syracuse, N. Y	61	Do.
Columbus, Ohio	4	No supervisor of kindergartens.
Dayton, Ohio	40	One supervisor of kindergartens.
Toledo, Ohio	76	Do.
Scranton, Pa	30	Do.
Dallas, Tex	5	The supervisor of kindergartens is also head of kindergarten training school.
Fort Worth, Tex	17	Do.
Houston, Tex	4	One supervisor of kindergartens.
Salt Lake City, Utah	13	One supervisor of kindergartens and primary grades.
Richmond, Va	19	One supervisor of kindergartens.

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[1] Kindergartens temporarily discontinued.
[2] Omaha and South Omaha schools have been consolidated.

Of the 39 cities with 50,000 to 100,000 population, 19 have special supervisors. In nine cities the kindergartens and primary grades are under one supervisor. In Peoria and South Bend the supervisor is also in charge of a kindergarten training class.

Savannah has no public school kindergartens, but several free classes are supported by various organizations and supervised by the principal of the association training school.

In Norfolk the expense of maintaining free kindergartens is shared by the board of education and an association, and the supervision of the classes is carried on by the principal of the association training school.

Table 4 sets forth the nature and scope of kindergarten supervision in the 39 cities.

TABLE 4.—*Supervision in cities of 50,000 to 100,000.*

Cities.	Kindergartens.	Type of supervision.
Mobile, Ala	9	One supervisor of kindergartens and first grades.
Berkeley, Cal	13	No special supervisor.
Sacramento, Cal	17	One supervisor of kindergartens.
San Diego, Cal	9	No special supervisor.
Pueblo, Colo	11	Do.
New Britain, Conn	16	One supervisor of kindergartens and first grades.
Waterbury, Conn	28	Do.
Savannah, Ga	6	The supervisor of association kindergartens is also head of kindergarten training school.
Peoria, Ill	19	The supervisor of kindergartens is also head of kindergarten training department of city normal school.
Evansville, Ind	24	One supervisor of kindergartens and primary grades.
Fort Wayne, Ind	13	Do.
South Bend, Ind	16	The supervisor of kindergartens is also head of kindergarten training school.
Terre Haute, Ind	32	One supervisor of kindergartens.
Kansas City, Kans	7	No special supervisor.
Covington, Ky	14	One supervisor of kindergartens.
Portland, Me	11	No special supervisor.
Holyoke, Mass	10	Do.
Somerville, Mass	4	Do.
Flint, Mich	40	Do.
Duluth, Minn	34	One supervisor of kindergartens and primary grades.
Manchester, N. H	5	No special supervisor.
Atlantic City, N. J	15	One supervisor of kindergartens and primary grades.
Bayonne, N. J	15	No special supervisor.
Hoboken, N. J	9	Do.
Passaic, N. J	18	Do.
Binghamton, N. Y	28	One supervisor of kindergartens and primary grades.
Schenectady, N. Y	10	Do.
Troy, N. Y	13	One supervisor of kindergartens.
Utica, N. Y	21	One supervisor of kindergartens and primary grades.
Yonkers, N. Y	36	No special supervisor.
Akron, Ohio	40	Do.
Springfield, Ohio	10	One supervisor of kindergartens.
Oklahoma City, Okla	46	Do.
Erie, Pa	10	No special supervisor.
Johnstown, Pa	4	Do.
Wilkes-Barre, Pa	7	Do.
Pawtucket, R. I	13	Do.
El Paso, Tex	4	Do.
Norfolk, Va	5	The supervisor of association kindergartens is also head of kindergarten training school.

Of the cities of 25,000 to 50,000 population, 40 have no special kindergarten supervisors. Five cities employ one supervisor for kindergartens and primary grades.

Evanston is organized into two school districts; in only one of these is employed a supervisor for kindergartens.

In Columbus, Ga., an association maintains a kindergarten training school the principal of which is also supervisor of the public-school kindergartens.

In Butte, Mont., the kindergartens have shared with the entire school system the benefit of an assistant superintendent, who is an experienced teacher and supervisor.

The nature and scope of kindergarten supervision in cities of 25,000 to 50,000 are indicated in Table 5.

TABLE 5.—*Supervision in cities of 25,000 to 50,000.*

Cities.	Kindergartens.	Type of supervision.
Alameda, Cal	5	No special supervisor.
Long Beach, Cal	14	Do.
Pasadena, Cal	15	One supervisor of kindergartens and primary grades.
Colorado Springs, Colo	8	No special supervisor.
Meriden, Conn	15	Do.
Stamford, Conn	18	Do.
Augusta, Ga	6	Do.
Columbus, Ga	8	The supervisor of kindergartens is also head of association kindergarten training school.
Aurora, Ill	4	No special supervisor.
Evanston, Ill	14	One supervisor of kindergartens in district 75.
Moline, Ill	17	One supervisor of kindergartens.
Oak Park, Ill	4	No special supervisor.
East Chicago, Ind	8	Do.
Hammond, Ind	16	One supervisor of kindergartens and primary grades.
Muncie, Ind	5	One supervisor of association kindergartens.
Burlington, Iowa	8	No special supervisor.
Cedar Rapids, Iowa	15	Do.
Council Bluffs, Iowa	25	Do.
Davenport, Iowa	19	One supervisor of kindergartens and primary grades.
Dubuque, Iowa	7	No special supervisor.
Waterloo, Iowa	16	Do.
Topeka, Kans	4	Do.
Lexington, Ky	7	One supervisor of kindergartens.
Bangor, Me	8	Do.
Brookline, Mass	10	No special supervisor.
Haverhill, Mass	4	Do.
Newton, Mass	13	One supervisor of kindergartens.
Pittsfield, Mass	6	Do.
Salem, Mass	6	No special supervisor.
Waltham, Mass	7	Do.
Battle Creek, Mich	12	One supervisor of kindergartens and primary grades.
Bay City, Mich	24	No special supervisor.
Jackson, Mich	14	One supervisor of kindergartens.
Kalamazoo, Mich	18	Do.
Lansing, Mich	23	Do.
Muskegon, Mich	10	Do.
Butte, Mont	6	No special supervisor.
Lincoln, Nebr	19	One supervisor of kindergartens and primary grades.
Nashua, N. H	8	No special supervisor.
East Orange, N. J	9	Do.
Montclair, N. J	9	Do.
New Brunswick, N. J	12	Do.
Orange, N. J	11	Do.
Perth Amboy, N. J	22	One supervisor of kindergartens.
West Hoboken, N. J	7	No special supervisor.
Amsterdam, N. Y	7	One supervisor of kindergartens.
Auburn, N. Y	10	No special supervisor.
Cohoes, N. Y	4	Do.
Jamestown, N. Y	21	Do.
Mount Vernon, N. Y	14	Do.
New Rochelle, N. Y	14	Do.
Niagara Falls, N. Y	10	Do.
Poughkeepsie, N. Y	7	Do.
Watertown, N. Y	20	Do.
Lorain, Ohio	9	One supervisor of kindergartens.
Tulsa, Okla	4	Do.
Cranston, R. I	8	No special supervisor.
Newport, R. I	10	Do.
Ogden, Utah	8	One supervisor of kindergartens.
Green Bay, Wis	4	No special supervisor.
Kenosha, Wis	16	One supervisor of kindergartens.
La Crosse, Wis	10	Do.
Madison, Wis	15	No special supervisor.
Oshkosh, Wis	22	One supervisor of kindergartens.
Racine, Wis	24	Do.
Sheboygan, Wis	16	Do.
Superior, Wis	19	No special supervisor.

Of the cities of 15,000 to 25,000 population, 82 are without a special kindergarten supervisor. In 8 cities, the kindergartens and primary grades are under one supervisor; in one of these, Bloomfield, N. J., all the elementary grades, including the kindergarten, are under the supervision of one person.

In Gary, Ind., the assistant superintendent exercises certain supervisory *functions in connection* with the kindergartens.

The situation in these cities is set forth in detail in Table 6.

TABLE 6.—*Supervision in cities of 15,000 to 25,000.*

Cities.	Kindergartens.	Type of supervision.
Phoenix, Ariz	6	One supervisor of kindergartens and primary grades.
Pine Bluff, Ark	10	No special supervisor.
Bakersfield, Cal	7	One supervisor of kindergartens.
Riverside, Cal	6	No special supervisor.
San Bernardino, Cal	5	Do.
Greenwich, Conn	10	Do.
New London, Conn	6	One supervisor of kindergartens.
Norwich, Conn	11	No special supervisor.
Waukegan, Ill	4	Do.
Gary, Ind	14	Do.
Michigan City, Ind	8	One supervisor of kindergartens.
Mishawaka, Ind	5	No special supervisor.
Richmond, Ind	9	Do.
Vincennes, Ind	6	One supervisor of kindergartens.
Fort Dodge, Iowa	6	Do.
Coffeyville, Kans	5	Do.
North Adams, Mass	6	No special supervisor.
Westfield, Mass	7	Do.
Escanaba, Mich	8	Do.
Pontiac, Mich	5	Do.
Hibbing, Minn	14	One supervisor of kindergartens.
Virginia, Minn	7	One supervisor of kindergartens and primary grades.
Winona, Minn	7	No special supervisor.
Concord, N. H	5	One supervisor of kindergartens.
Bloomfield, N. J	18	One supervisor of kindergartens and all elementary grades.
Hackensack, N. J	11	No special supervisor.
Kearney, N. J	11	One supervisor of kindergartens and primary grades.
Long Branch, N. J	5	No special supervisor.
Plainfield, N. J	11	Do.
West New York, N. J	5	Do.
Dunkirk, N. Y	12	Do.
Gloversville, N. Y	9	Do.
Ithaca, N. Y	4	One supervisor of kindergartens and primary grades.
Lackawanna, N. Y	7	No special supervisor.
Lockport, N. Y	12	One supervisor of kindergartens and primary grades.
Olean, N. Y	13	Do.
Port Chester, N. Y	9	No special supervisor.
Rome, N. Y	14	Do.
White Plains, N. Y	8	Do.
Asheville, N. C	6	Do.
Elyria, Ohio	8	Do.
Lakewood, Ohio	14	Do.
Mansfield, Ohio [1]	7	One supervisor of kindergartens.
Norwood, Ohio	4	No special supervisor.
Sioux Falls, S. Dak	7	Do.
Burlington, Vt	6	Do.
Appleton, Wis	14	Do.
Beloit, Wis	13	One supervisor of kindergartens.
Eau Claire, Wis	10	No special supervisor.
Fond du Lac, Wis	16	One supervisor of kindergartens and primary grades.
Wausau, Wis	9	No special supervisor.

[1] Kindergartens temporarily discontinued.

Table 7 indicates the nature and scope of supervision in the 94 ci under 15,000 population.

TABLE 7.—*Supervision in cities with under 15,000 population.*

Cities.	Kindergartens.	Type of supervision.
Bisbee, Ariz	7	One supervisor of kindergartens.
Pomona, Cal	6	Do.
Redlands, Cal	5	Do.
Santa Ana, Cal	6	No special supervisor.
Santa Barbara, Cal	6	One supervisor of kindergartens and primary grades.
Fort Collins, Colo	4	No special supervisor.
Bristol, Conn	10	Do.
Naugatuck, Conn	6	Do.
South Manchester, Conn	5	One supervisor of kindergartens.
Wallingford, Conn	4	No special supervisor.
Miami, Fla	5	Do.
Riverside, Ill	4	One supervisor of association kindergartens.
Crawfordsville, Ind	4	One supervisor of kindergartens.
Huntington, Ind	4	Do.

BLE 7.—*Supervision in cities with under 15,000 population*—Continued.

Cities.	Kindergartens.	Type of supervision.
e, Ind.	4	No special supervisor.
laine, Iowa	4	Do..
, Iowa	4	One supervisor of kindergartens.
d, Iowa	4	No special supervisor.
lltown, Iowa	16	Do.
City, Iowa	12	Do.
osa, Iowa	9	Do.
gton, Iowa	4	Do.
Kans	4	One supervisor of kindergartens.
a, Me	5	No special supervisor.
ee, Mass	5	Do.
Harbor, Mich	12	Do.
er, Mich	5	One special supervisor of kindergartens.
e, Mich	5	No special supervisor.
Falls, Mich	6	One supervisor of kindergartens.
iac, Mich	8	No special supervisor.
d, Mich	10	Do.
ton, Mich	4	One supervisor of kindergartens and primary grades.
od, Mich	14	One supervisor of kindergartens.
ing, Mich	8	No special supervisor.
ee, Mich	6	Do.
ique, Mich	4	Do.
tte, Mich	4	Do.
inee, Mich	8	Do.
d, Mich	4	One supervisor of kindergartens.
, Mich	5	No special supervisor.
, Mich	8	Do.
y, Mich	6	Do.
te. Marie, Mich	7	Do.
Rivers, Mich	4	Do.
se City, Mich	8	Do.
. Minn	6	Do.
m, Minn	4	One supervisor of kindergartens.
ne, Minn	4	No special supervisor.
inn	4	Do.
, Minn	10	One supervisor of kindergartens and primary grades.
, Minn	5	One supervisor of kindergartens.
to, Minn	4	No special supervisor.
Miss	6	One supervisor of kindergartens and primary grades.
alls, Mont	12	No special supervisor.
, Mont	6	Do.
nt, Nebr	9	Do.
gs, Nebr	5	Do.
Park, N. J	4	Do.
N. J	14	Do.
ood, N. J	4	Do.
d, N. J	8	Do.
, N. J	8	Do.
ford, N. J	5	One supervisor of kindergartens.
Orange, N. J	4	No special supervisor.
t, N. J	4	One supervisor of kindergartens.
wken, N. J	5	No special supervisor.
ld, N. J	8	Do.
range, N. J	7	Do.
, N. Y	4	Do.
l, N. Y	10	Do.
own, N. Y	4	Do.
gburg, N. Y	4	Do.
ice, N. Y	6	One supervisor of kindergartens.
alls, N. Y	5	No special supervisor.
Tonawanda, N. Y	10	Do.
a Springs, N. Y	5	Do.
anda, N. Y	6	Do.
nt, Ohio	4	Do.
gton C. H., Ohio	4	Do.
, Okla.[1]	6	One supervisor of kindergartens.
lle, Pa	4	No special supervisor.
, Pa	9	Do.
Wis	6	One supervisor of kindergartens and primary grades.
d, Wis	6	Do.
Dam, Wis	8	No special supervisor.
lle, Wis	5	Do.
woc, Wis	6	Do.
tte, Wis	10	Do.
, Wis	6	Do.
, Wis	6	Do.
, Wis	4	Do.
Point, Wis	7	Do.
sha, Wis	8	One supervisor of kindergartens.
llis, Wis	6	No special supervisor.

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[1] *Kindergartens temporarily discontinued.*

4. SUPERVISION IN CITIES GROUPED ACCORDING TO NUMBER OF KINDERGARTENS.[1]

Of 12 cities having 100 or more kindergartens, 10 have supervisors of kindergartens and 2 have no special supervisors:

New York, N. Y. (936)
Chicago, Ill. (376)[2]
Philadelphia, Pa. (271)
Cleveland, Ohio (936)
St. Louis, Mo. (169)
Boston, Mass. (143)
Los Angeles, Cal. (137)
Milwaukee, Wis. (134)[2]
Buffalo, N. Y. (121)
Detroit, Mich. (116)
Newark, N. J. (102)
Pittsburgh, Pa. (100)

Of 8 cities having between 70 and 100 kindergartens, 7 have supervisors of kindergartens and 1 has no special supervisor:

Minneapolis, Minn. (87)
Washington, D. C. (79)
Denver, Colo. (78)
Kansas City, Mo. (77)
Toledo, Ohio (76)
Rochester, N. Y. (74)[2]
Des Moines, Iowa (72)
Grand Rapids, Mich. (70)

Of 9 cities having between 50 and 70 kindergartens, all have supervisors of kindergartens:

St. Paul, Minn. (67)
Cincinnati, Ohio (66)
Providence, R. I. (65)
Omaha, Nebr. (62)
Indianapolis, Ind. (61)
Trenton, N. J. (61)
Syracuse, N. Y. (61)
Oakland, Cal. (60)
New Haven, Conn. (50)

Of 11 cities having between 30 and 50 kindergartens, 8 have supervisors of kindergartens and 3 have no special supervisor:

Oklahoma City, Okla. (46)
New Orleans, La. (43)
Akron, Ohio (40)[2]
Dayton, Ohio (40)
Flint, Mich. (40)[2]
Worcester, Mass. (39)
Yonkers, N. Y. (36)[2]
Louisville, Ky. (34)
Duluth, Minn. (34)
Terre Haute, Ind. (32)
Scranton, Pa. (30)

Of 20 cities having between 20 and 30 kindergartens, 11 have supervisors of kindergartens and 9 have no special supervisor:

Waterbury, Conn. (28)
Binghamton, N. Y. (28)
Atlanta, Ga. (27)
Seattle, Wash. (27)[2]
Camden, N. J. (26)[2]
Council Bluffs, Iowa (25)[2]
Evansville, Ind. (24)
Bay City, Mich. (24)[2]
Albany, N. Y. (24)
Paterson, N. J. (24)[2]
Racine, Wis. (24)
Birmingham, Ala. (23)
Baltimore, Md. (23)[2]
Lansing, Mich. (23)
New Bedford, Mass. (22)[2]
Perth Amboy, N. J. (22)
Oshkosh, Wis. (22)
Jamestown, N. Y. (21)[2]
Utica, N. Y. (21)
Watertown, N. Y. (20)[2]

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[1] Figures in parentheses following name of city indicate number of kindergartens.
[2] No special supervisor.

30 cities having between 15 and 20 kindergartens, 20 have su-
sors of kindergartens and 10 have no special supervisor:

port, Iowa (19)
, Ill. (19)
n, Nebr. (19)
ectady, N. Y. (19)
ond, Va. (19)
lor, Wis. (19)[1]
ord, Conn. (18)[1]
azoo, Mich. (18)
field, N. J. (18)
ic, N. J. (18)[1]
mento, Cal. (17)
ord, Conn. (17)[1]
, Ill. (17)
idge, Mass. (17)
Worth, Tex. (17)

New Britain, Conn. (16)
Hammond, Ind. (16)
South Bend, Ind. (16)
Marshalltown, Iowa (16)[1]
Waterloo, Iowa (16)[1]
Springfield, Mass. (16)
Fond du Lac, Wis. (16)
Kenosha, Wis. (16)
Sheboygan, Wis. (16)
Pasadena, Cal. (15)
Meriden, Conn. (15)[1]
Cedar Rapids, Iowa (15)[1]
Atlantic City, N. J. (15)
Bayonne, N. J. (15)[1]
Madison, Wis. (15)[1]

30 cities having between 12 and 15 kindergartens, 15 have
visors of kindergartens and 15 have no special supervisor:

Beach, Cal. (14)[1]
ton, Ill. (14)
Ind. (14)[1]
gton, Ky. (14)
l, Mass. (14)
ood, Mich. (14)
on, Mich. (14)
ng, Miss. (14)
n, N. J. (14)[1]
Vernon, N. Y. (14)[1]
Rochelle, N. Y. (14)[1]
N. Y. (14)[1]
wood, Ohio (14)[1]
ton, Wis. (14)[1]
ley, Cal. (13)[1]

Fort Wayne, Ind. (13)
Newton, Mass. (13)
Olean, N. Y. (13)
Troy, N. Y. (13)
Pawtucket, R. I. (13)[1]
Salt Lake City, Utah (13)
Beloit, Wis. (13)
Mason City, Iowa (12)[1]
Battle Creek, Mich. (12)
Benton Harbor, Mich. (12)[1]
Great Falls, Mont. (12)[1]
Jersey City, N. J. (12)
New Brunswick, N. J. (12)[1]
Dunkirk, N. Y. (12)[1]
Lockport, N. Y. (12)

40 cities having between 9 and 12 kindergartens, 8 have super-
s of kindergartens and 32 have no special supervisor:

rancisco, Cal. (11)[1]
, Colo. (11)[1]
ch, Conn. (11)[1]
nd, Me. (11)[1]
nsack, N. J. (11)[1]
ey, N. J. (11)
e, N. J. (11)[1]
ield, N. J. (11)[1]
Bluff, Ark. (10)[1]
l, Conn. (10)[1]
wich, Conn. (10)[1]
line, Mass. (10)[1]
ke, Mass. (10)[1]

Holland, Mich. (10)[1]
Muskegon, Mich. (10)
Eveleth, Minn. (10)
Auburn, N. Y. (10)[1]
Hornell, N. Y. (10)[1]
Niagara Falls, N. Y. (10)[1]
North Tonawanda, N. Y. (10)[1]
Springfield, Ohio (10)
Erie, Pa. (10)[1]
Newport, R. I. (10)[1]
Eau Claire, Wis. (10)[1]
La Crosse, Wis. (10)
Marinette, Wis. (10)[1]

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[1] No special supervisor.

Mobile, Ala. (9)
San Diego, Cal. (9)[1]
Richmond, Ind. (9)[1]
Oskaloosa, Iowa (9)[1]
Fall River, Mass. (9)
Fremont, Nebr. (9)[1]
East Orange, N. J. (9)[1]
Hoboken, N. J. (9)[1]
Montclair, N. J. (9)[1]
Gloversville, N. Y. (9)[1]
Port Chester, N. Y. (9)[1]
Lorain, Ohio (9)
Warren, Pa. (9)[1]
Wausau, Wis. (9)[1]

Of 41 cities having 7 or 8 kindergartens, 11 have supervisors of kindergartens and 30 have no special supervisor:

Colorado Springs, Colo. (8)[1]
Columbus, Ga. (8)
East Chicago, Ind. (8)[1]
Burlington, Iowa (8)[1]
Bangor, Me. (8)
Dowagiac, Mich. (8)[1]
Escanaba, Mich. (8)[1]
Ishpeming, Mich. (8)[1]
Menominee, Mich. (8)[1]
Michigan City, Mich. (8)
Owosso, Mich. (8)[1]
Traverse City, Mich. (8)[1]
Nashua, N. H. (8)[1]
Garfield, N. J. (8)[1]
Nutley, N. J. (8)[1]
Westfield, N. J. (8)[1]
White Plains, N. Y. (8)[1]
Elyria, Ohio (8)[1]
Cranston, R. I. (8)[1]
Ogden, Utah (8)
Beaver Dam, Wis. (8)[1]
Waukesha, Wis. (8)
Bisbee, Ariz. (7)
Bakersfield, Cal. (7)
Kansas City, Kans. (7)[1]
Lexington, Ky. (7)
Dubuque, Iowa (7)[1]
Waltham, Mass. (7)[1]
Westfield, Mass. (7)[1]
Sault Ste. Marie, Mich. (7)[1]
Virginia, Minn. (7)
Winona, Minn. (7)[1]
West Hoboken, N. J. (7)[1]
West Orange, N. J. (7)[1]
Amsterdam, N. Y. (7)
Lackawanna, N. Y. (7)[1]
Poughkeepsie, N. Y. (7)[1]
Mansfield, Ohio (7)
Wilkes-Barre, Pa. (7)[1]
Sioux Falls, S. Dak. (7)[1]
Stevens Point, Wis. (7)[1]

Of 59 cities having 5 or 6 kindergartens, 24 have supervisors of kindergartens and 34 have no special supervisor.

Phoenix, Ariz. (6)
Riverside, Cal. (6)[1]
Pomona, Cal. (6)
Santa Ana, Cal. (6)[1]
Santa Barbara, Cal. (6)
Naugatuck, Conn. (6)[1]
New London, Conn. (6)
Augusta, Ga. (6)[1]
Savannah, Ga. (6)
Vincennes, Ind. (6)
Fort Dodge, Iowa (6)
North Adams, Mass. (6)[1]
Pittsfield, Mass. (6)
Salem, Mass. (6)[1]
Crystal Falls, Mich. (6)
Manistee, Mich. (6)[1]
Petoskey, Mich. (6)[1]
Aurora, Minn. (6)[1]
Laurel, Miss. (6)
Butte, Mont. (6)[1]
Helena, Mont. (6)[1]
Lawrence, N. Y. (6)
Tonawanda, N. Y. (6)[1]
Asheville, N. C. (6)[1]
Guthrie, Okla. (6)
Burlington, Vt. (6)[1]
Antigo, Wis. (6)
Ashland, Wis. (6)
Manitowoc, Wis. (6)[1]
Monroe, Wis. (6)[1]
Neenah, Wis. (6)[1]
West Allis, Wis. (6)[1]
Alameda, Cal. (5)[1]
Redlands, Cal. (5)
San Bernardino, Cal. (5)[1]
Miami, Fla. (5)[1]

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[1] No special supervisor.

Mishawaka, Ind. (5)[1]
Muncie, Ind. (5)
South Manchester, Conn. (5)
Coffeyville, Kans. (5)
Augusta, Me. (5)[1]
Braintree, Mass. (5)[1]
Bessemer, Mich. (5)
Cadillac, Mich. (5)[1]
Osceola, Mich. (5)[1]
Pontiac, Mich. (5)[1]
Gilbert, Minn. (5)
Hastings, Nebr. (5)[1]
Concord, N. H. (5)
Manchester, N. H. (5)[1]
Long Branch, N. J. (5)[1]
Rutherford, N. J. (5)
Weehawken, N. J. (5)[1]
West New York, N. J. (5)[1]
Little Falls, N. Y. (5)[1]
Saratoga Springs, N. Y. (5)[1]
Dallas, Tex. (5)
Norfolk, Va. (5)
Janesville, Wis. (5)[1]

Of 47 cities having 4 kindergartens, 12 have supervisors of kindergartens and 35 have no special supervisor.

Fort Collins, Colo.[1]
Bridgeport, Conn.[1]
Wallingford, Conn.[1]
Aurora, Ill.[1]
Oak Park, Ill.[1]
Riverside, Ill.
Waukegan, Ill.[1]
Crawfordsville, Ind.
Huntington, Ind.
La Porte, Ind.[1]
Belle Plaine, Iowa.[1]
Creston, Iowa.
Fairfield, Iowa.[1]
Washington, Iowa.[1]
Salina, Kans.
Topeka, Kans.[1]
Haverhill, Mass.[1]
Somerville, Mass.[1]
Houghton, Mich.
Manistique, Mich.[1]
Marquette, Mich.[1]
Midland, Mich.
Three Rivers, Mich.[1]
Chisholm, Minn.
Coleraine, Minn.[1]
Ely, Minn.[1]
Mankato, Minn.[1]
Asbury Park, N. J.[1]
Englewood, N. J.[1]
South Orange, N. J.[1]
Summit, N. J.
Cohoes, N. Y.[1]
Geneva, N. Y.[1]
Ithaca, N. Y.
Johnstown, N. Y.[1]
Lansingburgh, N. Y.[1]
Columbus, Ohio.[1]
Fremont, Ohio.[1]
Norwood, Ohio.[1]
Washington C. H., Ohio.[1]
Tulsa, Okla.
Johnstown, Pa.[1]
Titusville, Pa.[1]
El Paso, Tex.[1]
Houston, Tex.
Green Bay, Wis.[1]
Oconto, Wis.[1]

5. PREPARATION AND EXPERIENCE OF KINDERGARTEN SUPERVISORS.

General educational preparation.—As a foundation for their professional preparation, the larger number of supervisors have been graduated from a four-year high-school course. Several have taken some high-school work followed by normal school training. Others have added one, two, or three years of college work to their high-school foundation. A number of others have taken special courses in art, music, literature, psychology, or philosophy; while two supervisors are graduates in music. One supervisor has had a course in a business college.

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[1] No special supervisor.

Of those who have completed a college course, four hold the degree of bachelor; one has received a B. A. degree from the University of Michigan, one an A. B. degree from the University of Nebraska, one a B. S. degree from Columbia University, and the fourth a B. A. degree from Beloit College.

Specific kindergarten training of supervisors of kindergartens.—All supervisors who are in charge of kindergartens alone have had full kindergarten training. Preceding their assignment to supervisory positions, they have had also from 2 to 22 years of actual teaching experience with children in kindergartens. In addition to experience with children, a considerable number of supervisors have been teachers in kindergarten training schools, and several have taught in primary grades.

One supervisor has had experience as grade critic in a normal school.

Extension of professional preparation.—A noteworthy fact connected with the preparation and experience of supervisors is that with very few exceptions frequent attendance upon summer school sessions has been employed as a means of extending and intensifying the training originally received. The summer schools of the University of Chicago and of Columbia University are many times mentioned; sessions at Chautauqua, N. Y., have been attended by several supervisors. Other supervisors have evidently secured leave of absence from their duties for definite periods of time in order to avail themselves of the excellent courses in kindergarten supervision offered during the winter terms of the universities.

Specific kindergarten training of kindergarten-primary supervisors.—A full course in kindergarten education has been taken by the larger number of supervisors who are in charge of both kindergartens and primary grades. A few supervisors report having had *some* courses in kindergarten work; the remaining few report that they have had no specific kindergarten training whatsoever.

It appears, therefore, that placing the kindergartens and primary grades under the supervision of a person who has not had specific kindergarten training is as much for the sake of economic convenience as for the sake of achieving organic relations between the kindergarten and the early grades.

In this connection, Miss Ida Vandergaw, of Oakland, Cal., writes:

> In Oakland the supervisor of primary work is officially the *adviser* of the kindergarten teachers. Kindergarten classes have been organized at intervals since 1895. * * * In 1913, the kindergartners asked the board of education that the supervisor of primary work be officially made their adviser.

Mrs. Abigail Sheriff, of Davenport, Iowa, makes this note:

> My visits to the kindergartens are hardly those of a supervisor.

The report from the supervisor in Bessemer, Mich., is:

> I am a grade supervisor and have but little time to give to kindergarten problems. We have children in kindergarten only one-half a year, substituting subprimary for the second half year.

The kindergartens of a public-school system are fewer in number than the primary grades; the demands, therefore, of the grades exceed those of the kindergartens, and the supervisor is obliged to give her time where it is most needed. For this reason a special supervisor for kindergartens alone is about to be appointed in Evansville, Ind. It is felt that more intensive supervisory work should be carried on among the kindergarten teachers.

Miss Alice T. Lee, of Lowell, Mass., reports that previous to her appointment as supervisor of primary grades and kindergartens she had been a primary principal for many years and had watched the development of the kindergartens in Lowell, and it has since been her aim to make the kindergarten a unit in the school system.

In Battle Creek, Mich., the kindergartens have come in gradually during the past few years, and there are still not enough of them to warrant the expense of a special supervisor for kindergartens and first grades; the primary supervisor, therefore, is at present in charge of them.

The supervisor of grade work in Antigo, Wis., Miss Amelia Sabin, has very little time for the supervising of "straight kindergarten" work. The kindergarten teachers teach a class of subprimary chilchildren in the morning and a class of kindergarten children in the afternoon. The supervisor is obliged to spend most of her time with new or beginning teachers in all grades. Sometimes she is called upon to substitute for teachers in the grades and also in the high school.

6. RESPONSIBILITY OF SUPERVISORS IN ORGANIZATION AND ADMINISTRATION OF KINDERGARTENS.

The tone of the reports of this phase of the subject indicates a good spirit of cooperation on the part of the superintendent, the school principal, the kindergarten teachers, and the kindergarten supervisor. This relationship offers an opportunity for truly democratic conduct, and while written reports can not be entirely relied upon for a statement of actual conditions, still, from the fact that principals and teachers and sometimes parents are called in consultation, it is evident that the ideals at work in these school relations are democratic, that there is a disposition to share responsibility, to hold conferences, and to act only as a result of united judgment.

The number of sessions a day, and the length of the sessions.—The degree of responsibility borne by the supervisor in regard to the number and length of sessions ranges from "making most of the decisions" to "no responsibility" whatsoever. In 16 cities[1] the supervisor has a large responsibility, consulting, of course, with the superintendent, the school principal, and the kindergarten teachers.

In 25 cities,[2] the supervisor acts in an advisory capacity, recommending to the board of education or school committee and to the superintendent measures concerning the number and length of sessions.

In 12 cities,[3] rulings in all such matters are made by the board of education. Supervisors in Ironwood, Mich., and Rutherford and Trenton, N. J., report: "The State laws govern the number and length of sessions."

Supervisors in 10 cities[4] report that when they assumed office the kindergartens were already organized and in running order. Supervisors in eight cities[5] write that they are only "partly responsible" for these details.

In 20 cities,[6] supervisors report that they are not at all responsible.

In the case of kindergartens controlled by associations,[7] the supervisor confers with the executive officers of the association and then renders decisions.

Number of children to each kindergarten; number of months children remain in kindergarten; promotion of children.—Measures relating to the size of the classes and the time of promotion from kindergarten to first grade are largely under the control of the supervisor. Noticeable, too, is the extent to which the judgments of the school principal and of the kindergarten teachers enter into the decisions, especially in regard to promotions. This is the case in 44 cities.[1]

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[1] Birmingham, Ala., Los Angeles, Sacramento, and Santa Barbara, Cal., Denver, Colo., Columbus, Ga., Crawfordsville and Vincennes, Ind., Fort Dodge, Iowa, Battle Creek and Detroit, Mich., Kansas City, Mo., Butte, Mont., Kearney, N. J., Schenectady and Syracuse, N. Y.

[2] Phoenix, Ariz., New Britain and South Manchester, Conn., Moline, Ill., Salina, Kans., Fall River and Worcester, Mass., Kalamazoo and Lansing, Mich., Gilbert, St. Paul, and Virginia, Minn., Lincoln, Nebr., Bloomfield, N. J., Albany, Buffalo, and Utica, N. Y., Cincinnati, Ohio, Oklahoma City, Okla., Philadelphia and Pittsburgh, Pa., Richmond, Va., Beloit, Fond du Lac, and Waukesha, Wis.

[3] Bakersfield and Oakland, Cal., Boston and Lowell, Mass., Muskegon, Mich., Minneapolis, Minn., Olean and Troy, N. Y., Scranton, Pa., Providence, R. I., Kenosha and La Crosse, Wis.

[4] Pasadena and Pomona, Cal., New London, Conn., Evansville and Hammond, Ind., Chisholm, Minn., St. Louis, Mo., Atlantic City, N. J., Toledo, Ohio, Antigo, Wis.

[5] New Haven, Conn., Peoria, Ill., Fort Wayne, Ind., Louisville, Ky., Bangor, Me., Cambridge, Mass., Dayton, Ohio, Salt Lake City, Utah.

[6] Waterbury, Conn., Washington, D. C., Michigan City, South Bend, and Terre Haute, Ind., Newton and Pittsfield, Mass., Bessemer, Grand Rapids, Houghton, and Jackson, Mich., Eveleth, Minn., Laurel, Miss., Jersey City, N. J., Binghamton, Ithaca, and Lockport, N. Y., Mansfield, Ohio, Fort Worth, Tex., Sheboygan, Wis.

[7] Atlanta and Savannah, Ga., Riverside Kindergarten Extension Association, Riverside, Ill., Indianapolis and Muncie, Ind.; Brooklyn Free Kindergarten Society, Brooklyn, N. Y.; Children's Aid Society, New York, N. Y.; New York Kindergarten Association, New York, N. Y.; St. Bartholomew's Parish, New York, N. Y.; Free Kindergarten and Industrial Association, Dallas, Tex.; Free Kindergarten Association, Norfolk, Va.

In 22 cities,[2] the supervisor offers advice and suggestions.

Supervisors in 11 cities[3] report that they have no responsibility in these matters. Supervisors in 5 cities[4] report that they are partly responsible; and those in 8 other cities[5] write that the kindergartens were already organized when they entered upon their duties.

The reports from Bakersfield and Oakland, Cal., Ironwood, Mich., and Beloit, Wis., refer to State laws which fix the age at which children shall be promoted from the kindergarten.

In the Bakersfield kindergartens the supervisor allows the enrollment to reach 50 and then establishes a waiting list. In Oakland the board of education granted the petition of the Kindergarten Club, composed of all the kindergarten teachers in the department, that 50 pupils be the maximum per teacher, the class to be divided into a morning group and an afternoon group as soon as the number enrolled exceeds 30. In regard to promotions, the supervisor in Oakland reports: "If the parents are willing, an immature child 6 years of age may be kept longer in the kindergarten, although by State law a child may enter primary at 6 years of age."

The report from Cincinnati mentions annual promotions in all the grades, including the kindergarten, and reports from Rutherford, N. J., and La Crosse, Wis., mention semiannual promotions. In exceptional cases, however, the supervisor and teachers may exercise discretion.

In Minneapolis, Minn., kindergarten children are promoted to first grade by maturity rather than by age.

Planning the kindergarten rooms.—It is a matter for surprise that supervisors, in the main, have such comparatively restricted latitude in room planning. Kindergarten rooms, and first-grade rooms as well, should be as unlike the traditional schoolroom as possible. The physical and social needs of young children demand that especial attention be paid to the hygienic, artistic, and convenient arrangements of the rooms and surroundings in which their education is carried on. Blackboards, cupboards, and window seats must be low enough for 5 and 6-year-old children to use with comfort; there must be abundant floor space for the free activities; the windows must be placed with reference to the hygiene of the eyes; and toilet-room conveniences must be planned for the best welfare and comfort of the small persons who use them.

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[1] Birmingham, Ala., Phoenix, Ariz., Los Angeles, Sacramento, and Santa Barbara, Cal., Denver, Colo., New Haven and Waterbury, Conn., Columbus, Ga., Peoria, Ill., Crawfordsville, Evansville, Fort Wayne, South Bend, and Vincennes, Ind., Fort Dodge, Iowa, Salina, Kans., Louisville, Ky., Bangor, Me., Fall River, Newton, and Boston, Mass., Battle Creek, Detroit, Houghton, and Lansing, Mich., Eveleth and Minneapolis, Minn., Laurel, Miss., Butte, Mont., Lincoln, Nebr., Bloomfield and Kearney, N. J., Albany, Binghamton, Buffalo, Ithaca, Lockport, Olean, Schenectady, Syracuse, and Utica, N. Y., Dayton, Ohio, and Waukesha, Wis.

[2] New Britain and South Manchester, Conn., Moline, Ill., Lowell and Worcester, Mass., Kalamazoo and Muskegon, Mich., Gilbert, St. Paul, and Virginia, Minn., Omaha, Nebr., Rutherford and Trenton, N. J., Troy, N. Y., Cincinnati, Ohio, Philadelphia, Pittsburgh, and Scranton, Pa., Providence, R. I., Fond du Lac, Kenosha, and La Crosse, Wis.

[3] Washington, D. C., Michigan City and Terre Haute, Ind., Pittsfield, Mass., Grand Rapids and Jackson, Mich., Jersey City, N. J., Mansfield, Ohio, Oklahoma City, Okla., Fort Worth, Tex., Sheboygan, Wis.

[4] Cambridge, Mass., Bessemer, Mich., Kansas City, Mo., Salt Lake City, Utah, Richmond, Va.

[5] Pasadena and Pomona, Cal., New London, Conn., Hammond, Ind., Chisholm, Minn., Atlantic City, N. J., Toledo, Ohio, Antigo, Wis.

In spite of the obvious need for the judgment of a trained kindergartner, the reports indicate that in 35 cities[1] the supervisor has no responsibility for planning the room. In 27 cities[2] the supervisor is sometimes consulted and is evidently permitted to give suggestions.

Larger powers are granted to supervisors in 15 cities,[3] for they submit plans and recommend measures which are usually carried out by the board of education and the superintendent. In Fort Wayne, Ind., the supervisor "may arrange plans provided she keeps within the first bid of the contractor."

In only 9 cities does it appear that a desirable degree of cooperation exists between the kindergarten supervisor and the school architect; and of these 9, supervisors in 5[4] report that the architect accepts the recommendations and suggestions of the supervisor and kindergarten teachers; in the other 4 cities[5] the architect submits his plans for kindergarten rooms to the supervisor for her approval. In Minneapolis the architect consults the supervisor concerning such details as spaces for pictures, amount of blackboard space, kindergarten cupboards, etc. In Cincinnati the art supervisor is often called in consultation.

Supervisors in Redlands, Cal., Laurel, Miss., Albany and Schenectady, N. Y., report that their responsibilities are confined to the arrangement of furniture and the details of decoration in kindergarten rooms already existing. The supervisor in Toledo may select rooms suitable for the kindergartens in the new school buildings in course of erection.

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[1] Birmingham, Ala., Pomona, Cal., New London and Waterbury, Conn., Columbus, Ga., Moline, Ill., Evansville, Hammond, Michigan City, and Terre Haute, Ind., Louisville, Ky., Cambridge, Lowell, Newton, and Pittsfield, Mass., Bessemer, Houghton, Kalamazoo, and Lansing, Mich., Eveleth and Virginia, Minn., Butte, Mont., Concord, N. H., Binghamton, Ithaca, and Lockport, N. Y., Mansfield, Ohio, Fort Worth, Tex., Salt Lake City, Utah, Richmond, Va., Antigo, Fond du Lac, Kenosha, La Crosse, and Sheboygan, Wis.

[2] Phoenix, Ariz., Pasadena, Cal., New Haven, Conn., Washington, D. C., Peoria, Ill., Crawfordsville, South Bend, and Vincennes, Ind., Coffeyville and Salina, Kans., Bangor, Me., Fall River and Worcester, Mass., Battle Creek and Jackson, Mich., Gilbert and St. Paul, Minn., Lincoln, Nebr., Atlantic City, Jersey City, Rutherford, and Trenton, N. J., Olean and Utica, N. Y., Philadelphia, Pa., Providence, R. I., Waukesha, Wis.

[3] Bakersfield, Los Angeles, Sacramento, and Santa Barbara, Cal., Denver, Colo., New Britain and South Manchester, Conn., Fort Wayne, Ind., Fort Dodge, Iowa, Boston, Mass., Chisholm, Minn., Kansas City, Mo., Dayton, Ohio, Scranton, Pa., Beloit, Wis.

[4] Oakland, Cal., Detroit and Grand Rapids, Mich., Minneapolis, Minn., Buffalo, N. Y.

[5] Kearney, N. J., Syracuse, N. Y., Cincinnati, Ohio, Pittsburgh, Pa.

The report from Worcester, Mass., contains this significant item:

> The kindergarten subcommittee of the Worcester school board recently went on record in a request to the superintendent of public buildings that arrangements be made in every new building and every addition to an old building for a kindergarten room.

Provision for gardening and other out-door work.—A maximum of out-door life is important for children, and actual contact with plants and animals such as is possible only out of doors is a vital element in child life. Kindergarten teachers are trained to recognize these values, and, in spite of difficulties of climate and popular objections to exposure, they strive to have the children in the open air a great deal of the time.

The responsibility of arranging for gardening in connection with the kindergartens is in the hands of the supervisors in 22 cities.[1] In one of these, Columbus, Ga., the supervisor insists upon gardening as a necessary part of the kindergarten course. From Salina, Kans., the supervisor writes: "We had very successful individual gardens." The arrangement in Rutherford, N. J., is such that four kindergartens share in one general garden. In Cincinnati the supervisor assists in providing gardens but is not always directly responsible for them. The report continues:

> Often the kindergartner, with the consent of the principal of the school and the supervisor of kindergartens, arranges for space in the neighborhood if there is nothing available in the school yard. Each fall the supervisor arranges with the park commissioner for space in the parks for bulbs, and the park gardener assists in the planting. All the schools in the down-town district use these beds.

Of 13 other cities having outdoor work, the chief responsibility in 7 of them[2] rests upon the principal of the school building and the kindergarten teachers. In 3 cities[3] the superintendent of schools, advised by the kindergarten supervisor, sees that there are kindergarten gardens. Tch rules of the school committee in Lowell, Mass., provide for gardening activities. In Birmingham, Ala., there is a supervisor of gardens who cooperates with the kindergarten teachers in providing gardening facilities for the young children. The kindergarten supervisor in Philadelphia plans the kindergarten gardens in cooperation with the regular school gardens.

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[1] Los Angeles and Santa Barbara, Cal., Denver, Colo., New Haven, Conn., Columbus, Ga., Fort Wayne, South Bend, and Vincennes, Ind., Salina, Kans., Jackson and Lansing, Mich., Chisholm and Minneapolis, Minn., Butte, Mont., Atlantic City and Rutherford, N. J., Schenectady and Utica, N. Y., Cincinnati, Dayton, and Mansfield, Ohio, Scranton, Pa.

[2] Oakland and Redlands, Cal., Evansville, Ind., Boston, Mass., Bloomfield and Trenton, N. J., Buffalo, N. Y.

[3] New Britain, Conn., Crawfordsville, Ind., Coffeyville, Kans.

In 16 cities[1] the kindergarten supervisor encourages, advises, and urges the teachers to include gardens in the activities of the kindergarten. The supervisor in Pittsfield, Mass., herself provides the seeds. The supervisor in Grand Rapids, Mich., provides the necessary implements. The supervisor in Pittsburgh, Pa., with wise prevision recommends to the school building committee that gardens be included in all the school plans.

Supervisors in 15 cities[2] report that they have no responsibility in this particular matter.

The obstacles of adverse climate and lack of ground space, and some of the alternatives practiced where gardens are not possible are brought to light in reports from 20 cities where little or no outdoor gardening is done. In South Manchester, Conn; Peoria, Ill.; Bangor, Me.; Concord, N. H.; and Troy, N. Y., no gardening is carried on. In Bakersfield, Cal., and Washington, D. C., the children of the kindergartens share garden space with the rest of the school where such space exists; otherwise indoor boxes are provided or the children are encouraged to do home gardening. In Louisville, Ky., and Virginia, Minn., ground space can rarely be secured. The season in Houghton, Mich., is too short for school gardens, but the supervisor urges and helps to plan home gardens. Home gardens are emphasized also in Hammond, Ind. The weather being prohibitive, little outdoor work is possible in Gilbert, Minn. The size of the class and the location of the school determine the amount and kind of outdoor work done in Albany, N. Y. Gardening is optional where ground space permits in Terre Haute, Ind., and Newton, Mass. Kansas City, Mo., reports no gardening but good playground equipment for the kindergartens. Laurel, Miss., and La Crosse. Wis., provide for excursions and field trips. In Kearney, N. J., the director of physical education confers with the kindergarten supervisor in regard to outdoor games. Fort Dodge, Iowa, reports that provision for outdoor work is coming about gradually.

Reports from supervisors of association kindergartens indicate that gardening is encouraged and carried on wherever space can be secured.

Supply of kindergarten materials.—Because of the special and technical nature of the materials used in the kindergarten, the supervisor and kindergarten teachers bear the chief responsibility for selecting and ordering the supplies. In 57 cities[1] the supervisor is entirely responsible, "subject to financial limitations," say the reports from Ironwood, Mich., and Fond du Lac, Wis. In Concord, N. H., the supervisor not only orders the materials, but also cares for them. In Grand Rapids, Mich., the supervisor receives requests from the teachers and does the purchasing.

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[1] Pasadena and Sacramento. Cal., Pittsfield, Mass., Battle Creek, Bessemer, Detroit, and Grand Rapids, Mich., St. Paul, Minn., Jersey City, N. J., Binghamton and Syracuse, N. Y., Pittsburgh, Pa., Salt Lake City, Utah, Richmond, Va., Beloit and Kenosha, Wis.

[2] Phoenix, Ariz., Pomona, Cal., New London and Waterbury, Conn., Cambridge, Mass., *Kalamazoo,* Mich., Eveleth, Minn., Lincoln, Nebr., Ithaca and Lockport N. Y., Providence, *R. I., Fort* Worth, Tex., Antigo, Fond du Lac, and Sheboygan, Wis.

In 14 cities[2] it is the teachers who prepare requisition lists and submit them to the supervisor for approval. The practice in Oakland, Cal., is to decide on the supplies by a vote of the kindergarten teachers as a body.

In Birmingham, Ala., Coffeyville, Kans., Houghton, Mich., and Omaha, Nebr., the supervisor prepares the lists and sends them to the superintendent for approval. In Bloomfield, N. J., the teachers send lists directly to the superintendent after having had a conference on the subject with him.

It is the custom in Bakersfield, Cal., Lansing, Mich., Rutherford, N. J., Troy, N. Y., and Scranton, Pa., for supervisor and teachers to confer over the lists, then send requisitions to the board of education.

In Boston the supervisor recommends and approves the lists, and action is taken by the board of superintendents. The supervisor in Cincinnati orders and apportions the supplies, and the business department of the school system secures bids, makes purchases, and distributes the materials.

Supplies are provided according to the rulings of the school committee in Lowell, Mass.

In 10 cities[3] the supervisor acts as adviser or assumes a slight degree of responsibility. In Phoenix, Ariz., Waterbury, Conn., Evansville, Ind., Eveleth, Minn., and Sheboygan, Wis., the supervisor reports "no responsibility."

In the case of groups of kindergartens supported by associations, the supervisor has a large share of responsibility.

The materials for the kindergartens supported by the New York Kindergarten Association are supplied from a "Penny Fund" contributed by the children.

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[1] Los Angeles, Pomona, and Santa Barbara, Cal., Denver, Colo., New Haven and South Manchester, Conn., Washington, D. C., Columbus, Ga., Moline and Peoria, Ill., Crawfordsville, Fort Wayne, Hammond, South Bend, Terre Haute, and Vincennes, Ind., Fort Dodge, Iowa, Salina, Kans., Louisville, Ky., Bangor, Me., Newton, Pittsfield, and Worcester, Mass., Detroit, Grand Rapids, Ironwood, Jackson, Kalamazoo, and Muskegon, Mich., Chisholm, Minneapolis, and Virginia, Minn., Kansas City, Mo., Butte, Mont., Lincoln, Nebr., Concord, N. H., Jersey City, Kearney, Perth Amboy, and Trenton, N. J., Albany, Binghamton, Buffalo, Ithaca, Syracuse, and Utica, N. Y., Dayton and Mansfield, Ohio, Oklahoma City, Okla., Philadelphia, and Pittsburgh, Pa., Fort Worth, Tex., Ogden and Salt Lake City, Utah, Fond du Lac, La Crosse, and Waukesha, Wis.

[2] Oakland, Redlands, and Sacramento, Cal., New London, Conn., Cambridge and Fall River, Mass., Battle Creek, Mich., Laurel, Miss., Atlantic City, N. J., Schenectady, N. Y., Providence, R. I., Antigo, Beloit, and Kenosha, Wis.

[3] Pasadena, Cal., *New Britain*, Conn., Michigan City, Ind., Bessemer, Mich., Gilbert *and St. Paul, Minn., Lockport* and Olean, N. Y., Toledo, Ohio, Richmond, Va.

7. THE KINDERGARTEN PROGRAM OR COURSE OF STUDY.

The supervisor's share in program making.—Some degree of responsibility for the kinedrgarten plan or program is assumed by almost every supervisor. In the main, the supervisor supplies and emphasizes the essential principles of program making and holds meetings with the teachers for the purpose of discussing and preparing plans of work. Upon the teachers is placed the responsibility for adapting the general principles to the specific conditions and needs of their respective groups of children.

Some supervisors supply their teachers with a yearly or quarterly, or monthly outline, printed or typed; in some cases these outlines are included in the printed courses of study provided for all the grades. A handbook covering the year's work is given to the kindergarten teachers in Denver.

In some instances teachers are required to send their plans for a week or a month in advance to the supervisor for her modifications and suggestions. In other instances, the supervisor defines the standards and aims and looks to the teachers to bring about the desired results.

Methods employed in preparing the program.

	Number of supervisors.[1]
Supervisor holds program meetings, discussions, conferences with teachers; enunciates general principles	58
Supervisor provides printed or typed course of study; yearly, quarterly, or monthly outlines suggestive in character	24
Teachers submit plans to supervisors for modifications	10
Each teacher makes her own plans entirely	8
Supervisor defines aims and standards; results are expected from teachers	4
Miss Blow's uniform program is followed	3
Supervisor gives fixed program; teachers modify it as to details	2
Experienced teachers plan their own programs; inexperienced teachers submit plans to the supervisor	1

How supervisors secure creativeness from the teachers.—Originality and creativeness are terms capable of more than one interpretation, and covering a wide range of departures from the conventional. For this reason, not the least of the kindergarten supervisor's problems is that of leading teachers to use such excellent discernment that they may be able to judge between what is genuinely creative in their own work and what is merely unusual or positively freakish.

To this end, supervisors repeatedly stress the essential principles of education as distinct from teaching devices, and lay emphasis upon the necessity for considering the limitations as well as the possibilities that lie within the material used in the kindergarten. The teachers, therefore, are requested to bring with them to program meetings models of handwork, ideas for the use of nature materials, suggestions for games and rhythms, and plans for exhibits. These contributions are then judged by teachers and supervisor according to accepted standards of excellence, and the best ones selected to be worked out in the kindergartens.

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[1] Including supervisors of association kindergartens.

By way of encouragement of valid originality, it is the practice of some supervisors to arrange a meeting of all the teachers in the kindergarten room of one who is doing noteworthy work and is willing to demonstrate it to her fellow teachers; in some instances, individual teachers are sent to observe the original work of one of their number. Some supervisors attend State and National conventions and bring back stimulating suggestions, ideas, and material that can be applied to local conditions; some supervisors make it possible for the teachers themselves to attend conventions or visit out-of-town kindergartens. Making teachers responsible for developing and demonstrating certain subjects at the teachers' meetings, and encouraging them to experiment with various materials are other methods employed by supervisors.

Summary of the means used by supervisors and number of times each method is mentioned.

	Times mentioned.
Much freedom allowed to teachers and their personality permitted to show itself; the program kept flexible	33
Reports, new ideas, suggestions, contributions brought by teachers and supervisor to group meetings, and use made of such contributions	26
Details left to teachers, responsibilities for the kindergarten placed definitely upon them; also responsibilities connected with teachers' meetings	24
Successes and signs of originality encouraged and emphasized; restraint is placed upon criticism of results	20
Meetings arranged at kindergarten rooms where teachers doing original work demonstrate it; individual teachers visit such kindergartens	10
Teachers urged to visit out-of-town kindergartens; to read and study; to see and discuss new ideas in operation; to experiment with methods and materials	10
Teachers required to submit written program in advance for criticism	8
"Only well-trained teachers are employed"	2
"Do not secure it"	1

8. VISITS TO KINDERGARTENS—INTERVIEWS AND MEETINGS WITH TEACHERS.

Frequency of visits.—The determining factors in the number of visits paid annually to each kindergarten are the number of kindergartens under the charge of a supervisor, and the needs of individual kindergartens. While a regular schedule of frequency is the aim of the supervisor, she breaks in upon the regularity in case the younger and inexperienced teachers require more of her assistance.

In Philadelphia, with 271 kindergartens; Boston, with 143; Los Angeles, with 137; and Pittsburgh, with 100, the supervisor can visit each kindergarten not oftener than once or twice a year, exceptions being made in cases of special need. The supervisor in Pittsburgh reports: "I plan to visit each kindergarten twice a year; my assistant visits them three times a year. Many more visits than these are made to kindergartens which require special help." Detroit has 116 kindergartens; each one receives three visits a year. Washington, D. C., with 79 kindergartens, reports about three visits a year to each kindergarten.

Supervisors in Minneapolis, St. Louis, Cincinnati, and Richmond relate the frequency of their visits to the needs of each kindergarten; in Jersey City and Ogden visits are made "as often as possible"; while in New Haven, South Manchester, and Oakland the supervisors do not adhere to any regular schedule.

In Denver, Grand Rapids, Kansas City, Trenton, Buffalo, and Sheboygan supervisors visit each kindergarten four or five times a year. Seven visits a year is the schedule in Albany, Oklahoma City, and Salt Lake City; eight visits in St. Paul, and ten in Worcester.

A monthly visit is the practice in 31 cities.[1] In Pomona, Terre Haute, Battle Creek, Lincoln, and Troy, once in three weeks is the schedule. Once in two weeks is the rule in 13 cities,[2] Pasadena, however, stretching the time to once in 16 days. In Crawfordsville, Syracuse, and Bloomfield the rule is three times a month.

Weekly visits are made in Columbus (Ga.), Fort Dodge, Muskegon, Chisholm, Eveleth, Laurel, Fond du Lac, and Kenosha. Twice a week is the rule in Houghton and Rutherford. In Bangor the supervisor reports that she spends nearly every morning in a kindergarten.

In each of four cities—Bakersfield, Concord, Mansfield, and Salina—the supervisor directs one kindergarten and makes supervisory visits to the other classes several times a year. In Bakersfield the time allowance for visiting is one day each week.

Supervisors of groups of kindergartens controlled by an association pay visits weekly, monthly, or according to the needs of the individual kindergartens.

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[1] Birmingham, Ala., Phoenix, Ariz., Redlands and Santa Barbara, Cal., New Britain and Waterbury, Conn., Evansville, Fort Wayne, and Michigan City, Ind., Louisville, Ky., Cambridge, Fall River, Lowell, and Pittsfield, Mass., Bessemer, Ironwood, Jackson, and Lansing Mich., Omaha, Nebr., Atlantic City, Perth Amboy, N. J., Ithaca, Lockport, Schenectady, and Utica, N. Y., Toledo, Ohio, Scranton, Pa., Providence, R. I., Antigo, Beloit, and La Crosse, Wis.

[2] Pasadena and Sacramento, Cal., Moline and Peoria, Ill., Hammond and South Bend, Ind., Coffeyville, Kans., Kalamazoo, Mich., Gilbert and Virginia, Minn., Kearney, N. J., Olean, N. Y., Dayton, Ohio.

Length of visits.—Like the frequency of visits, their duration varies in relation to need and circumstance. By some supervisors, the entire session of two and one-half or three hours is regarded as essential to effective supervision. This is the case in 20 cities,[1] in one of which, Fond du Lac, the time is divided between the kindergarten and the primary room in each building.

In 15 cities[2] the minimum length of a visit is between one and two hours.

In 22 cities[3] the minimum length is one hour, but the supervisor in Waterbury makes a point of spending an *entire* session once a year in each kindergarten. In Boston the supervisor plans to stay not less than one hour in one room unless there are three kindergartens in the same building; in this event, she goes from one to another every few minutes.

Briefer visits are the rule in 30 cities,[4] the length ranging from 15 to 45 minutes. In Houghton extreme brevity is achieved, the minimum being 5 minutes, the maximum 60 minutes.

In Moline, Laurel, Jersey City, Cincinnati, and Philadelphia, no set duration is observed, the demands of the occasion determining the length of the visit.

Supervisors of association kindergartens, as a rule, let their visits cover the entire session.

No positive assertion can be made regarding the connection between effective supervision and the length of the supervisor's visit; but, obviously, experience must be a potent factor in quickening the perceptions and clarifying the judgments of an observer. Interesting testimony on this point is contained in Miss Dozier's Leaves from a Supervisor's Notebook.[5] In 1876 Miss Dozier became one of two supervisors placed in charge of the public school kindergartens of St. Louis. Describing the events of those pioneer days, when Dr.

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[1] Redlands, Cal., South Manchester, Conn., Washington, D. C., Coffeyville, Kans., Grand Rapids, Ironwood, and Kalamazoo, Mich., Minneapolis, Minn., Kansas City, Mo., Omaha, Nebr., Concord, N. H., Rutherford, Trenton, N. J., Albany, Troy, N. Y., Mansfield, Ohio, Oklahoma City, Okla., Ogden, Utah, Fond du Lac and Sheboygan, Wis.

[2] Phoenix, Ariz., Bakersfield, Cal., Michigan City and Terre Haute, Ind., Louisville, Ky., Pittsfield, Mass., Bessemer, Jackson, and Muskegon, Mich., Perth Amboy, N. J., Buffalo and Utica, N. Y., Toledo, Ohio, Richmond, Va., La Crosse, Wis.

[3] Birmingham, Ala., Los Angeles, Pasadena, Pomona, and Santa Barbara, Cal., New Britain, New Haven, and Waterbury, Conn., Columbus, Ga., Peoria, Ill., Crawfordsville and South Bend, Ind., Fort Dodge, Iowa, Boston and Lowell, Mass., Detroit and Lansing, Mich., St. Louis, Mo., Lockport, N. Y., Dayton, Ohio, Fort Worth, Tex., Beloit, Wis.

[4] Sacramento, Cal., Denver, Colo., Evansville, Fort Wayne, Hammond, Ind., Bangor, Me., Cambridge, Fall River, and Worcester, Mass., Battle Creek, Crystal Falls, and Houghton, Mich., Chisholm, Eveleth, Gilbert, St. Paul, and Virginia, Minn., Lincoln, Nebr., Atlantic City, Bloomfield, and Kearney, N. J., Ithaca, Olean, and Schenectady, N. Y., Pittsburgh and Scranton, Pa., Providence, R. I., Salt Lake City, Utah, Antigo and Kenosha, Wis.

[5] Kindergarten Review, January, February, and March, 1909.

William T. Harris, the superintendent of the St. Louis schools, was desirous of proving the practicability of introducing kindergartens into the school system, Miss Dozier says:

> With the rapid increase in the number of kindergartens, a new problem arose. I could not make a short visit to a kindergarten suffice for my observations. Again I went to Dr. Harris; and when he told me the time would come when I could enter a kindergarten and in five minutes determine the tendencies of the work, I doubted his statement. With 68 kindergartens to be seen and helped, I learned my lesson. In the end I could enter a kindergarten and at a glance take in the environment, determining the questions of orderliness, good or bad housekeeping. A look at the desk, piano, window-sills, and the work of the children as it lay spread out on the tables, was sufficient to arrive at the teacher's orderliness in space, and it was also a revealer of her mental orderliness. A glance would acquaint me with the teacher's fullness or poverty of æsthetic taste. One searching look, and the measure of the children's interest and attention was known. The teacher's poise, a happy, cheerful, busy, genuine atmosphere was at once felt. * * * I understood the teacher's power of control. I could detect the hygienic conditions and how faithfully the janitor performed his duties.

Nature and purpose of visits.—The aims and ideals held in the minds of kindergarten supervisors in respect to their relations with the teachers under their charge are abundantly revealed in the reports concerning the nature of the visits to the kindergartens. The many times that friendliness, kindliness, helpfulness, and tact are mentioned, indicate the high value attached to these personal qualities, and show an earnest intention on the part of the supervisors to perform their obligations in a commendably sympathetic frame of mind.

"To give helpful suggestions," "to advise," "to assist teachers with their difficulties," "to cooperate in all possible ways," "to encourage, inspire, stimulate," "to praise good work," are expressions of frequent occurrence. It is interesting to note in this connection that the personal characteristics which kindergarten supervisors consciously aim to exhibit toward their teachers are the very ones which teachers appreciate most highly according to a study of Teachers' Estimates of Supervisors,[1] by Grace E. Bird. In her study Miss Bird remarks:

> The quality receiving the highest number of votes was friendly sympathy or kindly encouragement, with a percentage of 55. For the sake of brevity this might be called kindness. In a former experiment the same quality received the largest number of votes among 150 normal-school girls, 253 high-school boys, and 139 high-school girls, in estimating the best qualities of the best teachers they ever had. * * * So far, it seems that in school work this simple Christian virtue is more appreciated than any other quality, either affective or intellectual.

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[1] School and Society, June 16, 1917.

When it comes to a matter of supervisory practice, the reports indicate a variety of aspects. Criticisms of a positive or constructive character are the rule. Some supervisors follow up their suggestions by giving a demonstration of the desired method. Conducting the morning circle, telling stories, leading the games, developing an exercise in handwork, are some of the forms of demonstration.

Observation, with a view to conferring with the teachers later on, is another practice. Some supervisors direct their observations chiefly toward the conditions and needs of the children; some toward the kindergarten room in respect to its order, hygienic condition, and decorations; other focus their attention upon the methods, manners, and spirit of the teachers with the children; and still others observe closely the way the teachers are developing the program-thought and handling the material.

The statement is made by several supervisors that one purpose of their visits is to keep in touch with the children themselves, and thus to gain fresh inspiration.

When arranged in order of frequency of mention, the nature and purpose of visits stand as follows:

Nature and purpose of visits.

	Times mentioned.
To give helpful suggestions, friendly aid, kindly advice, sympathetic cooperation	40
To offer constructive and appreciative criticism	25
To observe, study, compare, with a view to conferring with teachers later on	22
To *show how*, to take part in morning circle, game circle, story-telling, gift work and handwork	18
To judge of efficiency, methods, manners, and spirit of teachers with children	18
To encourage, stimulate, inspire	16
To confer with teachers at close of session, to interchange ideas, to discuss	10
To inspect, to exercise general supervision	10
To note the conditions and needs of children	9
To judge of organization, to note the kind of discipline, to rate the teachers, to get the atmosphere of the room	7
To see how the work is developed by the teachers and how the program is carried out	6
To note the condition of the room as to its orderliness, hygienic condition, decorations	5
To correct the work and point out defects	3
To see that students from the training school are gaining proper experience in practice teaching	3
To keep in touch with childhood and thus gain inspiration	3
To ascertain what parent-calls should be made	1

For the sake of comparison, the qualities and practices enumerated in Miss Bird's study of Teachers' Estimates of Supervisors are herewith appended:

	Percentages of frequency of mention.
Kindness or sympathy	55
Systematic individual supervision	48
Cooperation	16
Executive ability	10
Professional knowledge	10
Progressiveness	8
Leadership in the community	8
Reliable judgment	7
Broad scholarship	5

Individual interviews.—It is impossible to emphasize too strongly the necessity for tact and good judgment on the part of the supervisor in holding interviews with teachers. A teacher's usefulness may be permanently enhanced or irredeemably stunted according to the attitude of the supervisor toward her and her daily problems.

In order that the greatest amount of encouragement and help may accrue to the teachers, the time immediately following a visit to a kindergarten is, as a rule, devoted to the personal conference. The problems are then apparent, the situation fresh in mind, and the supervisor's suggestions are timely.

Some supervisors observe office hours and receive individual teachers at such times. Others hold interviews by appointment, or at the request of teachers, or whenever a need arises. One supervisor reports that the telephone is sometimes employed for the conference.

Group meetings.—Meetings of supervisor with teachers, held monthly or oftener, are the rule. In cities having several hundred kindergartners, the supervisor finds it necessary to call together the teachers of one district at a time, in order to preserve the informal and helpful character of the meetings.

Much variety is noticeable in the nature of the meetings, not only in respect of one city taken with another, but also in respect of one meeting with another in the same city. The discussion of business connected with supplies and other administrative details occupies but a small portion of the time. Discussions of the program or plan of work, discussions of topics selected or assigned in advance to individuals or groups, discussions of general educational principles and of new educational movements, both within and apart from the kindergarten, interchange of ideas and methods between the kindergarten teachers and grade teachers, as well as the demonstration of practical phases of work, occupy the meeting period of one to two hours.

The following arrangement, according to the number of times each kind of purpose is mentioned, speaks for itself:

Nature and purpose of meetings.

	Times. mentioned.
To discuss kindergarten program or course of study and problems and needs	50
To discuss general educational principles and assigned or chosen topics and to hear reports from groups of teachers to whom topics have been assigned	49
To demonstrate practical phases of work with children or with teachers; games, handwork, and suggestive exercises given by supervisor; to discuss plans for mothers' meetings	27
To gain mutual stimulus and inspiration; to raise standards and improve methods; to unify but not uniformize the work in the kindergartens	26
To exchange experiences as to subject matter and methods, as to new lines of work being tried out in kindergartens, tests, and experiments; to introduce new ideas	26
To gain broader acquaintance with kindergarten interests, current literature, conventions, methods of organization	12
To exchange ideas with grade teachers as to subject matter and methods in relation to the child and the curriculum of the grades	12
To discuss new educational movements apart from the kindergarten	8
To listen to lectures; to hear speakers from a distance	3
To study great literature occasionally for self renewal and refreshment	1

9. POINTS UPON WHICH SUPERVISORS BASE THEIR ESTIMATES OF KINDERGARTEN TEACHERS' ABILITY.

While the qualities upon which supervisors base their estimate of teachers do not differ essentially from those deemed valuable in grade teachers, certain of them receive a greater emphasis in the training schools which specialize in preparing kindergarten teachers.

The right kind of kindergarten work requires certain native qualities in the young women desiring to become kindergarten teachers. These qualities, the spirit of nurture or mothering, a sympathetic understanding of how a little child feels and thinks, and insight into the significance of crude beginnings, are the very ones the kindergarten training school consciously aims to develop and intensify in the students-in-training.

Grade teachers, on the other hand, are trained to consider and deal with the child as a *learning* being, and not primarily as a feeling, doing individual.

During the period of training, the kindergarten student has much personal contact with children. Her experience in observation and practice teaching awakens in her the vitality of interest so characteristics of all kindergartners and enables her to translate the kindergarten spirit and philosophy into actual conduct.

The qualities upon which the supervisors base their judgment of a teacher's ability can be grouped under the following heads: (1)

Personal character and qualities; (2) Results of teaching as evidenced in the development of the children; (3) Background of scholarship and technical ability; (4) Attitude toward the school and the community.

A study of each one of the groups of qualities yields the following enumeration placed in order of frequency of mention:

Personal character and qualities.

	Times mentioned.
Sympathy, understanding, seeing from the child's standpoint, play-spirit	36
Personality, charm, womanliness, mother-spirit, culture	32
Professional spirit, loyalty	28
Personal appearance, neatness in dress, cleanliness, observance of personal hygiene, health, orderly housekeeping	20
Adaptability, common sense, tact, good judgment, "brains"	15
Poise, manner, self-control	11
Flexibility, open-mindedness, ambition, ability to grow	11
Originality, resourcefulness	8
Idealism, vision	4
Cheerfulness, humor	4
Obedience to authority	2

Results as evidenced in children's development.

	Times mentioned.
Vitality of program, systematic progress and development of children	34
Teaching ability as shown in children's power to think, to express themselves, and to control themselves in behavior	31
Atmosphere of the kindergarten, happiness of teacher and children together	23
Management and discipline of children through their activities rather than through repression	22
Interest of children as shown in good attendance	17
Children's good work in first grade	11

Background of scholarship and technique.

	Times mentioned.
Technique as to materials, methods, and activities; artistic ability, ability in music, in use of good English	33
Intellectual strength and breadth, scholarship, educational background, interest in reading and study, knowledge and application of kindergarten principles	23
Good training, professional equipment, preparation, experience	21
Executive ability, effort, initiative, vitality, attention to school business	18

Attitude toward school and society.

	Times mentioned.
Interest in education in general, desire to cooperate with the rest of the school, especially with primary grades	21
Atttitude toward home, parents, neighborhood; recognition of kindergarten as a link between home and school	9
Ability to develop community sentiment in favor of the kindergarten	3

10. METHODS OF STIMULATING TEACHERS TO FURTHER STUDY.

The problem of what is termed the "after-training of teachers" is a persistent one. The supervisor, true to all that is implied in the word *super*-vision, is continually seeking to draw the body of teachers to the levels of vision and insight enjoyed by herself; while the teachers, absorbed in the details of each day's technique, are sometimes apt to forget their obligations to grow in insight and in knowledge of principles, and to overlook the fact that increased familiarity with principles will enable them to correct and improve faulty technique.

It is generally recognized that good books and magazine articles, summer school sessions, educational meetings, courses of lectures, and exchange of visits, when properly used, are means of stimulating professional growth in a teacher. The endeavors of supervisors, therefore, are in the direction of securing contacts between the teachers and these media of development. Teachers are advised, invited, urged to read and study, sometimes under the leadership of the supervisor, sometimes in self-organized study groups; they are encouraged to take courses of lectures and attend summer school sessions; and arrangements are made whereby they may visit kindergartens and first-grade classes in their own and neighboring cities.

It is worthy of note that only three supervisors report as "unsuccessful" their efforts to stimulate teachers to further study.

Equally noteworthy is it that in few instances is mention made of devices which savor of whipping teachers into extension of their studies, such as formal rating, required reading-circle work, promotional examinations, or required attendance at summer schools before being granted a salary increase.

In one city teachers who "branch out" are starred. In two other cities study is required of all teachers, one supervisor stating that special classes for required study are provided, the other stating that a teacher's increase in salary depends upon his university credits.

Methods employed by supervisors in order of frequency of mention are as follows:

Methods of stimulating to further study.

	Times mentioned.
Suggest and urge reading books and magazine articles; provide list of references to publications	32
Provide and make it possible for teachers to attend lectures given by specialists, or to take courses of study during the year	26
Arrange for discussions at teachers' meetings of books and articles, also of matters of general educational interest	17
Urge attendance at educational conventions and summer-school sessions	14

	Times mentioned
Keep teachers informed of new methods of work done in schools and colleges and by prominent kindergartners, bring back ideas and reports from educational meetings	13
Read with the teachers, set the example of study as well as urge others to it	13
Make teachers responsible for preparing papers and reports for meetings, and encourage the formation of study clubs	12
Send teachers to visit other kindergartens and first-grade classes in their own and neighboring cities, and secure from outside kindergartners reports concerning their activities	10
Provide a library of books and magazines for teachers	6
Urge individuals to attain to higher standards	5
Arouse in teachers an interest in making experiments	4
Advise further study	3
" Unsuccessful "	3
" Require study of all teachers "	2
" Star the teacher who branches out "	1

11. RELATION OF SCHOOL PRINCIPALS TO KINDERGARTEN TEACHERS AND KINDERGARTEN SUPERVISORS.

By virtue of belonging to the public school system, every kindergarten is an integral part of the school in which it is maintained and necessarily conforms to the general rules of the school.

The principals of schools, therefore, hold themselves responsible for the kindergartens in regard to matters of general management, and so far as concerns good work in the school as a whole, but rarely in regard to the methods or materials or technique employed by the kindergarten teachers.

In some instances the principal advises with the kindergarten supervisor in respect to desirable standards and results by which the work of the kindergarten teachers may be measured, and cooperates with the supervisor in passing judgments upon the qualities of the teachers.

Several supervisors report that the principal calls attention to certain deficiencies in the work of teachers and indicates where closer supervision should be exercised.

12. RELATION OF SUPERVISORS OF SPECIAL SUBJECTS (MUSIC, ART, MANUAL TRAINING, PHYSICAL EDUCATION) TO THE KINDERGARTENS.

The spirit prevailing among supervisors of special subjects and the kindergarten supervisor and teachers is one of friendly cooperation; but, with a few exceptions, special supervisors exercise no official control over the kindergartens.

The reasons for this are apparent. Music, art, manual activities, and physical training, as they relate to the development of young *children*, are subjects of instruction in the kindergarten training schools. The capacities and interests of children of kindergarten age are also subjects of instruction in the kindergarten training schools. It is a matter of presupposition, therefore, that kindergarten teachers are prepared to lead the children up from one level to another of appreciation and technical skill in these forms of human expression, always mindful of the individual child's needs and abilities.

Supervisors of special subjects, on the other hand, are interested largely in their respective subjects; their experience, too, has usually been with older children; and yet they possess a comprehensive knowledge of music, art, handcraft, or physical education. This comprehensive knowledge enables the special supervisors to indicate worthy standards and clarify aims for their coworkers in the kindergarten.

It seems a wise plan, then, that the kindergarten supervisor and teachers should carry on the actual work with the children, availing themselves meantime of the unofficial help generously offered by the specialists.

Opportunities for receiving such suggestions and inspiration are afforded by informal conferences and occasional group meetings of kindergarten teachers to which the special supervisors come by request. In some instances, supervisors of special subjects respond to invitations to visit the kindergartens.

Exceptions to the rule of nonofficial relations exist in a number of communities as listed below:

Birmingham, Ala. The music supervisor or assistant pays regular visits to the kindergartens. In the training school she outlines the work and sets the standards.

Oakland, Cal. The supervisor of drawing discusses with the kindergarten teacher the work of the first grade, and points out in what respects the work in the kindergarten is a preparation for the first grade.

Columbus, Ga. The music supervisor instructs the kindergarten supervisor and teachers and visits the kindergartens once a week.

Evansville, Ind. To a slight extent the kindergartens are supervised by the music and art supervisors.

Fort Wayne, Ind. The art supervisor directs the art work of the kindergartens.

Fort Dodge, Iowa. The music supervisor directs the music work in the kindergartens.

Coffeyville, Kans. Special supervisors hold weekly meetings with the kindergarten teachers.

Louisville, Ky. The music supervisor meets monthly with the kindergarten teachers.

Battle Creek, Mich. The music supervisor visits the kindergartens weekly, offers suggestions, but exercises no control.

Grand Rapids, Mich. The music supervisor has full supervision of the music in the kindergartens, outlines all the work, instructs the teachers in methods, and selects all the songs.

Eveleth, Minn. The supervisors of music and art give to the kindergarten teachers monthly outlines; they make reports and hold meetings.

St. Paul, Minn. The supervisors of music and art and the physical director hold meetings once a semester with the kindergarten teachers and suggest outlines of work.

Laurel, Miss. The music supervisor plans the songs to be sung in the kindergartens.

Butte, Mont. The supervisors of music and art outline the work, visit the kindergartens, and hold monthly meetings with the kindergarten teachers.

Omaha, Nebr. The special supervisors give the work to the students in the city training school.

Atlantic City, N. J. The special supervisors are in touch with the work of the kindergartens; they visit, give assistance, and offer suggestions. The standards of work in the kindergartens are such as to receive the approval of the specialists.

Binghamton, N. Y. The supervisor of music and the physical director pay visits to the kindergartens and report the visits; they call meetings of the kindergarten teachers whenever they so desire.

Ithaca, N. Y. The supervisors of music and art visit the kindergartens once a month; they make annual reports to the superintendent and keep the work up to desired standards.

Pittsburgh, Pa. The supervisors of music visit the kindergartens as they do the grades, giving 20 minutes every two weeks.

Ogden, Utah. The music supervisor holds monthly meetings with the kindergarten teachers and outlines especially the rhythm work for the kindergartens.

Beloit, Wis. The music supervisor comes to the kindergartens once in two weeks for 20 minutes.

Kenosha, Wis. The supervisor of industrial arts holds meetings with the kindergarten teachers.

13. KINDERGARTEN-PRIMARY INSTRUCTION FOR BOTH GROUPS OF TEACHERS.

The problem of establishing an organic relation between the kindergarten and the grades just above is being approached from several directions. Friendly and sympathetic relations between the teachers of the kindergarten and the teachers of the primary grades have long existed, but willing spirits alone are not sufficient. There still remains the task of working out an effective coordination of the two phases of the educational system.

It is recognized that one indispensable step in such coordination is an increased understanding on the part of kindergartners of the work of primary grades, and increased understanding on the part of primary teachers of the work of the kindergarten. Training courses in normal schools are undergoing reorganization of a type that promises well for the teachers of the future, but in the meantime the great mass of present-day teachers are without any regular provision for instruction which will enable them to make adjustments in their respective phases of teaching.

The following summaries of reports from supervisors serve to show how meager and incidental is such instruction.

Instruction in primary work for kindergarten teachers.—In the larger number of cities, provision for the instruction of kindergarten teachers in the work of the primary grades is incidental and occasional.

In some instances the supervisor of kindergartens is also supervisor of primary grades; she holds occasional meetings and arranges for an interchange of visits between the kindergarten teachers and the primary teachers. Sometimes joint meetings are called for the specific purpose of discussing problems that concern the relations of the two groups of teachers. Sometimes informal conferences and personal talks among kindergarten and primary teachers are employed as a means of arriving at a better understanding of one another's aims and methods. In some cases the kindergarten supervisor visits the grades and confers with the primary supervisor in order that the work may be better coordinated.

Interesting efforts are being made in some cities to correlate the kindergarten with the first grade through the course of study. To this end, outlines and lists of stories, games, songs, handwork, etc., done by the children in the kindergarten are passed on to the first-grade teacher at promotion time.

Provision for giving regular instruction in primary work to kindergarten teachers is reported from 19 cities. In Birmingham, Ala., St. Paul, Minn., St. Louis, Mo., Omaha, Nebr., Albany, N. Y., and Dayton, Ohio, this instruction is given in the city normal school during the period of teacher training.

In Los Angeles and Pasadena, Cal., Fort Wayne, Ind., Kansas City, Mo., Butte, Mont., and Bloomfield, N. J., joint meetings of kindergartners and first-grade teachers are held regularly for purposes of instruction.

In Oakland, Cal., Battle Creek and Grand Rapids, Mich., and Kearney, N. J., the supervisor of kindergartens is also in charge of primary grades and gives regular instruction.

In Louisville, Ky., the grade supervisor includes kindergartners in the regular conferences held with first-grade teachers.

In Ithaca and Utica, N. Y., kindergarten teachers having been prepared in the normal school for both phases of work are eligible for positions as first-grade teachers.

Instruction in kindergarten work for grade teachers.—With few exceptions the instruction in kindergarten aims and methods given to grade teachers is incidental.

The means of imparting such instruction are the same as those employed in instructing kindergarten teachers in the work of the primary grades, namely, occasional joint meetings arranged by the supervisor of kindergarten and primary grades, personal talks among primary teachers and kindergarten teachers, and visits to kindergarten classes.

In several instances the first-grade teachers are given, at the time of promotion, outlines and lists of stories, games, songs, pieces of handwork, etc., done by children in kindergartens. By this means the first-grade teacher gains some idea of what she may build upon.

From 14 cities come reports of provision for giving regular instruction in kindergarten work to primary teachers.

In St. Louis, Mo., Omaha, Nebr., Albany, N. Y., and Dayton, Ohio, such instruction is given in the city normal school during the period of teacher training.

In Los Angeles, Pasadena, and Oakland, Cal., Fort Wayne, Ind., Battle Creek and Grand Rapids, Mich., Bloomfield and Kearney, N. J., the primary or first grade work and the kindergartens are under the charge of one supervisor who gives regular instruction at joint meetings of the two groups of teachers.

In Kansas City, Mo., the kindergarten and primary teachers come together for instruction at the monthly institutes.

In Butte, Mont., the assistant superintendent of schools is a trained kindergartner and holds joint meetings for purposes of instruction.

14. CITIES IN WHICH NO SPECIAL SUPERVISOR OF KINDERGARTENS IS EMPLOYED.

In the tables on pages 12 to 17, inclusive, are listed the cities reporting to the Bureau of Education that no special supervisor of kindergartens is employed.

This characterization, however, must not be taken to mean that the kindergarten teachers in such cities are without supervisory care; it means that the responsibilities ordinarily resting upon a kindergarten supervisor are distributed among other school officers, the superintendent or assistant superintendent, the supervising principal, a committee of kindergarten teachers, or the senior kindergarten teacher in the system.

Administrative details.—In practically all the cities the responsibility for appointing teachers and rating their abilities and for directing the organization of the kindergarten classes falls upon the superintendent, who makes recommendations to the board of education and from them receives sanction for the actions involved. In executing these details the superintendent is assisted by his deputy or district superintendents, supervising principals, and principals of school buildings.

The matter of selecting equipment and supplies for the kindergartens is usually referred by the superintendent to the kindergarten teachers themselves, in some cases through a committee and in some cases through the senior kindergarten teacher. In Chicago, Cleveland, and Burlington, Iowa, the establishment of a standard equipment automatically takes care of this detail.

Opinions of superintendents as to lack of special supervisor.—In the opinion of the larger number of superintendents (60 per cent) the kindergartens in their cities do *not* suffer appreciably from the lack of special supervision; 36 per cent believe that the kindergartens in their cities are much handicapped for the want of such supervision; 4 per cent make no report on this point. One superintendent of the larger group, having reported that he himself attends to all the necessary details in connection with the care of the kindergartens, adds: "How can I say that the kindergartens suffer without embarrassing my ego?"

Not a few superintendents of the larger group believe that having a special supervisor for kindergartens tends to keep apart the kindergartens and the primary grades and that the kindergartens are more closely integrated with the school system when they receive the same treatment as do the grades. The tendency to oversupervision in all departments of school organization is consciously avoided by several superintendents. The comment in one report is: "Large systems suffer from excessive, as small systems do from inadequate, supervision."

A shortage of funds for school purposes is also a factor in the matter, for it is felt in many cases that the number of kindergarten classes is too small to warrant the employment of a special supervisor, even if one were deemed desirable.

"If we had a kindergarten supervisor we might accept poorer teachers," is an opinion shared by a considerable number of superintendents; as it is, the nonsupervised condition calls for the careful selection of well trained, experienced kindergarten teachers, graduates of accredited training schools. In the absence of a supervisor the teachers form themselves into an association for study and for unification of the work, and in this way keep themselves up to worthy standards and also participate in progressive movements.

Of the smaller group of superintendents who feel that the kindergartens in their cities do suffer, a number believe that having a special supervisor would improve the quality of the work and provide needed leadership for the teachers.

The type of supervisor most desired is one capable of directing the work of the primary grades as well as that of the kindergartens. Inability to meet the expense is the chief obstacle to the employment of a supervisor.

Opinions of kindergarten teachers as to lack of supervisor.—Kindergarten teachers in 60 per cent of the cities reporting offer no opinion as to whether or not the kindergartens suffer for lack of special supervision. In contrast, superintendents in only 4 per cent of the cities reporting make no response on this phase of the subject.

One reason for silence on the part of many teachers is not far to seek. Teachers are so close to the factors that make for the success of the kindergartens that they lack the perspective necessary to pronounce just judgments upon their own work and that of their fellow teachers. They prefer to say nothing. Superintendents, on the other hand, can view conditions with a detached, impersonal attitude, and are thus enabled to express themselves frankly.

In several cities the opinions of teachers coincide with those of the superintendent to the effect that the number of kindergarten classes is too small to justify the expense of employing a kindergarten supervisor, and that the teachers themselves, formed into an association for discussion and study, can and do keep their work raised to a high standard of excellence. It is admitted in one or two instances that some of the kindergartens suffer, and that there is room for improvement in all of them; but doubt is expressed whether a kindergarten supervisor is what is needed to bring about the desired improvement.

It is believed that certain dangers invariably accompany the advent of a supervisor; for instance, a supervisor who clings to old, formal methods makes serious difficulties for younger, more progressive teachers by obliging them to follow set programs and rules. Again, supervised work tends to take responsibility and initiative from the teachers and places them in the hands of the supervisor; the originality of the teachers is thus suppressed.

Another evil that is feared is the creation of a situation which tends to make the teachers " cater to the supervisor's whims for the sake of good standing." A supervisor would more or less consciously try to bring all the kindergarten classes to an undesirable type and degree of uniformity. It is believed, too, that the kindergartens come into closer contact with the public school system and are regarded less as outsiders if they are not set apart by having a special supervisor.

Among teachers who believe that the kindergaretns in their cities do suffer without special supervision, it is felt that a leader is needed, a leader able to unify, not *uniformize*, the work of the kindergartens, to raise the standards, especially in music, art, and handwork, to check or regulate tendencies on the part of teachers to extravagant forms of experimentation, to stimulate discussion of interesting topics at teachers' meetings, to be the medium of integrating the work of the kindergarten and the first grade, and to develop or educate the community sentiment in regard to supporting and extending public school kindergartens.

15. OPINIONS OF KINDERGARTEN TEACHERS AS TO THE TYPE OF SUPERVISOR DEEMED DESIRABLE.

A number of teachers seem to be averse to the idea of any actual supervisor of kindergartens whatsoever, but they are willing to lay down counsels of perfection in case one should be employed.

It is felt that in regard to personal qualities, a supervisor should be wise, just, sympathetic, impartial, and inspirational; she should show faith in the teachers; she should not be autocratic, interfering, dictatorial, nor should she seek to force her views and methods upon teachers regardless of conditions and temperaments.

It is believed that professionally a supervisor should be awake to present-day needs and the changing conditions of society; she should be open-minded, progressive, and ready to encourage experimentaion, and to assist in arriving at definite conclusions; she should be trained in both liberal and conservative schools of thought and be able to correlate all schools; she should be able to acquaint the eachers with the best current ideas; she should be familiar with the meanings and aims of education as a whole, and should possess abilty to arouse community interest in the kindergarten. A number of eachers are of the opinion that the best type of supervision comes from one thoroughly trained and broadly experienced in kindergaren education, experienced also in primary methods, capable of aking charge of kindergartens and primary grades with a view to coordinating the work of the two.

In regard to supervisory activities it is suggested that the supervisor of desirable type is one who would make frequent visits to the kindergartens and give constructive criticism following each visit; who would hold meetings and conferences with the teachers nd provide courses of lectures for them; who would arrange exhibits of kindergarten work; who would unify the work of the kindergartens and unite the teachers; who would outline plans of work for the kindergartens and give suggestions as to the problems ncountered in the daily activities. A number of teachers feel that hey would approve of a supervisor capable not only of telling them how to do better work, but also of showing how by actually teachng a group of children; but other teachers believe that a supervisor should give only general suggestions and leave the working out of details to the individual kindergartners.

16. PRACTICAL SUGGESTIONS FOR NONSUPERVISED SYSTEMS OF KINDERGARTENS.

From several superintendents and teachers come suggestions as to how to secure some of the benefits of kindergarten supervision in the absence of a regularly appointed officer.

In some of the smaller cities in California there is what is called a supervising director, who directs one of the kindergartens and pays supervisory visits to each of the other kindergartens once in two months; she discusses the new and commendable points observed in each kindergarten, and confers with the other teachers concerning program plans. Such a director usually receives $5 a month more than the other kindergartners. The cities adopting the plan find it much better than no supervisor at all.

A suggestion from a teacher in an Iowa city is as follows:

> A helpful kind of supervision would be a kindergarten training teacher who would come several times a year to address the club of kindergartners, bring new ideas and suggestions, and be an adviser to whom the teachers could take their difficulties; one who would visit the kindergartens at these times and offer suggestions for improvement.

From another teacher comes the inquiry as to the practicability of having a State kindergarten supervisor who would travel from place to place, visit the kindergartens, give to the teachers the constructive criticism they need, and from her observations prepare a report to be distributed as a State educational bulletin.

From a superintendent comes the suggestion that the cities along the line of railroads for 100 miles or so cooperate in employing a special supervisor of kindergartens, who could give to each city one day a week or two days in three weeks, or some such arrangement of time. The kindergartens would thus receive the attention necessary to their improvement, and the expense of the supervisor would not bear heavily on any one city.

Another superintendent believes that the emphatic need is for an adjustment of the courses of study. He writes:

> An expert in child psychology and one thoroughly familiar with actual conditions should arrange a kindergarten course to fit the first grade, and a first-grade course to fit the kindergarten. The present interplay is neither normal nor economical.

Where a large system of kindergartens is involved, the plan followed in Los Angeles for one year previous to the appointment of the present supervisor has commendable features.[1] The kindergarten teachers were divided into 11 groups, each group including teachers in adjacent schools for the sake of convenience. These groups had two responsibilities, arranging a system of visits within their own number, and conducting a series of round tables monthly for the entire group. Each group selected one of its own members as visitor for the district and as presiding officer for the round-table meetings. The aims in the visiting were not at supervision in the technical sense of the term, but rather in the direction of arousing consciousness of a common problem, and of extending to all the teachers through the medium of the visits and the round table a knowledge of the varying activities, devices, and materials employed by the members of the group.

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[1] See account given by Mrs. Susan M. Dorsey, assistant superintendent of schools, Los *Angeles, Cal.*, in National Education Association Magazine, Nov., 1917.

17. CONCLUSIONS AND RECOMMENDATIONS.

1. For the sake of preserving the well-being of young children just beginning school life, the supervisors of kindergartens and of primary grades should have a much larger share in planning kindergarten rooms and first-grade rooms than is given them at persent. By room-planning is meant more than the mere arrangement of furniture and disposing of decorations. The location of the room, the placing of windows, making blackboards, cupboards, and lockers low enough for the children's comfort, providing suitable toilet rooms, are all matters which should be referred to the kindergarten specialist at the time that building plans are being prepared.

2. A greater degree of responsibility should be assumed by supervisors for providing gardening experiences for the children, especially where the kindergarten teachers and school principals are lukewarm in the matter. The plans followed in the down-town schools in Cincinnati are full of suggestions for other cities.

3. Since it appears that placing kindergartens under the charge of a nonkindergarten trained primary supervisor serves the purposes chiefly of convenience and economy, it is recommended that one of the senior kindergarten teachers be appointed assistant supervisor and allowed to devote all her time to the kindergartens under the direction of the primary supervisor.

4. The relations between supervisors of special subjects and the kindergarten supervisor and teachers should be those of cooperation and mutual helpfulness. The practice of having special supervisors act as expert advisers while the kindergarten teachers are responsible for the work as carried out by the children is the best form of organization. In this way the kindergarten supervisor is able to protect the children and to maintain a sane balance in kindergarten practice.

5. Kindergarten supervisors should be more mindful of the application of the principle of self-activity in their relations with the

teachers in their charge. To lead rather than to dominate, to provide situations in which the teachers can realize the fullest freedom and can grow in teaching power and ability to ues their own initiative, should be the conscious aim of the supervisor.

6. Adequate provision should be made for giving regular instruction in kindergarten aims and methods to the primary teachers who are already teaching, and for giving regular instruction in primary aims and methods to kindergarten teachers who are already teaching.

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PROCEEDINGS OF ASSOCIATIONS.

College art association of America. Bulletin, No. 4, September 1918. 157 p. plates. 8°. (John Shapley, secretary, Brown University, Providence, R. I.)

Contains: 1. John Pickard: Art's counter offensive, p. 19–24. 2. Duncan Phillips: Art and war, p. 24–37. 3. E. R. Bossange: Technical and general education in the arts, p. 48–58. 4. B. M. Godwin: Preparation of the child for a college course in art, p. 61–69. 5. J. C. Dana: The value of the study of art in our institutions of higher education, p. 69–83. 6. Walter Sargent: The value of art education in colleges, p. 83–88. 7. Lloyd Warren: Taste: its awakening and development, p. 88–94. 8. Edward Robinson: Value of the study of art to the students in colleges and universities, p. 95–102. 9. S. P. Capen: The value of art in a college course, p. 103–10. 10. Alice V. V. Brown: Standardization of art courses, p. 110–14. 11. A. W. Dow: A course in fine arts for candidates for the higher degrees, p. 114–18. 12. E. W. Forbes: The art museum and the teaching of the fine arts, p. 120–29. 13. R. A. Cram: The place of the fine arts in higher education, p. 129–35.

1527. Illinois state teachers' association. Journal of proceedings of the sixty-fourth annual meeting . . . held at Springfield, Ill., December 27-29, 1917. Springfield, Ill., Illinois state journal co., 1918. 200 p. 8°. (Robert C. Moore, secretary, Carlinville, Ill.)

Contains: 1. E. C. Perisho: The school and the state, p. 73–76. 2. F. G. Blair: Governor Coles' contribution to freedom and education in Illinois, p. 76–88. 3. Jeannett Bates: The child labor law, p. 96–101. 4. R. S. Jones: The administration of child labor laws, p. 101–104. 5. H. T. McCrea: Are county institutes meeting the needs of the teachers? p. 104–108. 6. W. W. Charters: Systematic topics, multi-problems and projects, p. 109–14. 7. R. O. Stoops: The use of score cards for judging text books, p. 114–19. 8. Fiske Allen: The training of teachers in service, p. 119–24. 9. I. M. Allen: Dr. Johnston's philosophy of education, p. 126–33. 10. E. S. Jones: Some things to do in community civics, p. 138–41. 11. S. G. Harrod: Responsibility of the college for the preparation of high school teachers, p. 147–54.

1528. National conference committee on standards of colleges and secondary schools. Minutes of the eleventh conference, held at New York, N. Y., March 1, 1918. 20 p. 8°. (F. W. Nicolson, secretary, Wesleyan university, Middletown, Conn.)

Contains: 1. B. E. Young: The abolition of German in the secondary schools, p. 4–7. 2. Definition of educational terms, p. 9–10. 3. Wilson Farrand: Marking systems in secondary schools, p. 12–16. 4. F. W. Nicolson: Academic credit for national service, p. 17–20.

1529. North central association of colleges and secondary schools. Proceedings of the twenty-third annual meeting . . . March 21, 22 and 23, 1918, Hotel La Salle, Chicago, Ill. Pub. by the Association, 1918. 163 p. 8°. (Henry E. Brown, secretary, Kenilworth, Ill.)

Contains: 1. J. H. Newlon: The need of national standards of high school administration, p. 17–22. 2. P. W. L. Cox: Junior high schools—Recommendations of the Commission on unit courses and curricula, p. 22–27. 3. J. E. Stout: Report of Commission on unit courses and curricula, p. 27–32. 4. C. C. Certain: High school library standards, p. 33–77. 5. K. C. Babcock: Methods now being employed by the Commission on institutions of higher education in standardizing colleges, p. 82–92. 6. Commission on institutions of higher education: Standards of accrediting institutions, 1918, p. 92–103. 7. T. F. Holgate: President's address, p. 105–15. 8. D. R. Forgan: The relation of finance to the war, p. 115–25. 9. W. A. Jessup: The war in its relation to the schools, p. 126–32. 10. C. O. Davis: Report of Commission on secondary schools—Directory, etc., [38] p. fol. p. 140.

1530. Pennsylvania. University. Schoolmen's week proceedings, April 11-13, 1918. Philadelphia, Pa. Pub. by the University. 362 p. 8°. (University bulletins, 18th ser., no. 5, pt. 3, June 1918)

Contains: 1. A. D. Yocum: General education as a factor in democracy, p. 25–40. 2. C. H. Judd: Educational measurements—their benefits to teachers and to laymen, p. 40–50. 3. Payson Smith: Uniformity in education—a protest, p. 50–52. 4. G. A. Mirick: Supervision of instruction in city and rural schools, p. 55–58; Discussion, p. 58–61. 5. Harlan Updegraff: Teachers' salaries and the increasing cost of living, p. 61–74. 6. C. C. Green: Economy through cost accounting, p. 74–81. 7. H. O. Dietrich: A comparative study of child progress, p. 82–86. 8. Harlan Updegraff and L. A. King: Report on cooperative work in educational measurements, p. 88–111. 9. Thomas Francis: Measuring the fundamental operations of arithmetic in the Scranton schools, p. 114–22. 10. P. A. Boyer: The Courtis tests in arithmetic in a group of Philadelphia schools, p. 122–31. 11. J. M. Fisher: A study of individual pupils with the aid of Courtis tests in arithmetic, p. 131–37. 12. Katherine E. Moran: The use of Courtis tests in silent reading, p. 137–42. 13. C. H. Judd: Measurement of reading, p. 142–50. 14. E. L. Bowman: Prevocational education in Erie, p. 150–56. 15. W. C. Ash: The work of the Philadelphia evening trades schools, p. 159–66. 16. A. F. Payne: Industrial education for conscripted men, p. 166–69. 17. Ernest Burnham: The preparation of rural teachers, p. 169–85; Discussion, p. 185–88. 18. G. A. Mirick: Supervision of rural schools, p. 188–89;

Discussion, p. 189–93. 19. N. C. Schaeffer: The schools and the war, p. 193–95. 20. G. W. Wheeler: School credit for farm work, p. 196–202. 21. C. W. Hunt: A study in the use of the Courtis arithmetic tests, p. 203–9. 22. C. H. Judd; Measurement and the promotion of pupils, p. 209–16. 23. H. C. Eicher: Pennsylvania's school building problem, p. 216–29; Discussion, p. 229–35. 24. A. L. Hall-Quest: Teaching by supervision, p. 239–45. 25. The relation of general science to more advanced science courses [by] Louise Nichols, p. 248–56; [by] S. L. Shanaman, p. 257–59. 26. C. A. Herrick: Commercial education and the war, p. 269–73. 27. S. G. Nichols: The training of the commercial teacher. The problem and the causes, p. 273–77. 28. A. C. Baugh: The English of oral English, p. 277–83. 29. Ruth Wanger: Vocational guidance and the social sciences, p. 300–304; Discussion, p. 305–7. 30. Alma V. Saurwalt: American history since 1880. How can it be taught adequately without sacrificing things of importance in earlier American history? p. 307–13: Discussion, p. 313–14. 31. H. H. Gage: A syllabus for the first, second and third year of French, p. 317–23. 32. J. F. Woodhull: The project method in the teaching of science, p. 332–37; Discussion, p. 337–42. 33. A. J. Jones: The meaning and scope of educational guidance, p. 343–46. 34. H. A. Vanderslice: A course of study in educational guidance in the small high school, p. 346–51. 35. Ruth Wanger: Vocational guidance at the South Philadelphia high school for girls, p. 352–57.

EDUCATIONAL HISTORY AND BIOGRAPHY.

31. **Maddox, William Arthur.** The free school idea in Virginia before the civil war; a phase of political and social evolution. New York city, Teachers college, Columbia university, 1918. 225 p. 8°. (Teachers college, Columbia university. Contributions to education, no. 93)

    Bibliography: p. 199–217.

32. **Mead, Arthur Raymond.** The development of free schools in the United States as illustrated by Connecticut and Michigan. New York city, Teachers college, Columbia university, 1918. 236 p. tables. 8°. (Teachers college, Columbia university. Contributions to education, no. 91)

    Bibliography on Connecticut: p. 200–202.
    Bibliography on Michigan: p. 219–220.

33. **Quintero, Gregorio Torres.** Education among the ancient Mexicans. Inter-America, 2: 15–21, October 1918.

    Study of education among the pre-Columbian Aztecs of the central valley of Mexico.

CURRENT EDUCATIONAL CONDITIONS

UNITED STATES.

34. **Challman, S. A.** The public schools of Rochester, Minnesota. American school board journal, 57: 29–31, October 1918.

    The scope of activities undertaken by the schools of Rochester, Minn., the administration of the schools, etc.

35. **Chamberlain, Arthur.** Nationalizing education. Sierra educational news, 14: 407–13, September 1918.

    A summary of the Pittsburgh meeting of the N. E. A., the National emergency in education; proposed secretaryship in education; increase in teachers' salaries, etc.

36. **Davidson, Percy E.** Educational reform and the manly virtues. School and society, 8: 361–67, September 28, 1918.

    Discusses the criticisms made by Mr. Thomas in School and society for November 24, 1917, against Flexner's Modern school and the doctrine of interest.

1537. Education and economic success. Fortnightly review, n. s. 104: 198-208, 354-66, August, September 1918.

Signed "Fabricius."

Emphasizes the importance of education and scientific training to economic success. Compares educational conditions in England with those in the United States, to the detriment of the former. Gives high praise to our system of education, and quotes freely from statistics published by the Bureau of education.

Second paper of series says that the great characteristics of American education are: Prodigal lavishness, and great practical efficiency. Excerpts from the Mosely and other reports on educational conditions in the United States are included.

1538. A handbook of American private schools; an annual publication. Fourth edition, 1918. Boston, Porter E. Sargent, 1918. 711 p. 12°.

The introductory part of this book contains sections entitled as follows: History of the private school, Military education, College entrance examinations, Modern and experimental schools, The new school movement, Recent development of country day schools, Review of the year in education, Vocational education, War time activities of the schools, Educational reconstruction in England, Recent educational literature, A select classified reading list. The bulk of the work comprises a critical description of schools and summer camps, comparative tables, educational directories, etc.

1539. **Harley, Lewis R.** Why German system of education fails. Pennsylvania gazette, 17: 34-35, October 11, 1918.

After showing the false principle of German education, the author concludes by speaking of the dangers of Prussianism to American schools.

1540. Visit of the British educational mission to the United States, October-December 1918. [New York city, British bureau of information, 1918] 18 p. 8°.

Gives the itinerary of the mission and biographical sketches of the members.

FOREIGN COUNTRIES.

1541. **Anderson, J. T. M.** The education of the New-Canadian; a treatise on Canada's greatest educational problem. London and Toronto, J. M. Dent & sons, ltd., 1918. 271 p. illus. 8°.

1542. **Emerson, Gertrude.** "Bitter learning" in Japan; a study in human documents. Asia, 18: 851-58, October 1918.

To be concluded in the next issue.

The story of *kugakko*, or bitter learning, suffering for an education, which is full of a pathetic romance in Japan.

1543. **Lobenstine, E. C.,** *ed.* The China mission year book, 1917 (eighth annual issue) ed. by the China continuation committee, under the direction of an editorial committee. Shanghai, The Christian literature society for China, 1917. 588 p. 12°.

Part V, General and religious education, contains chapters on the following subjects: Some educational developments in the past year, Higher education of women, Supervision of education in Szechwan, Progress of theological education in China, Religious condition of students in mission schools, Chinese returned students. Chapter XLIV is on Medical education in China, 1916.

1544. **Maugain, Gabriel.** Les professeurs italiens et la science allemande. I. Revue internationale de l'enseignement, 38: 241-53, July-August 1918.

To be continued.

Takes up the subject of the intellectual influence of Germany in Italy. This article discusses the German invasion in Italian education.

1545. **Sissons, C. B.** Bi-lingual schools in Canada. London, Toronto, J. M. Dent & sons, ltd., 1917. 242 p. 12°.

EDUCATION AND THE WAR.

1546. **Cutler, Frances W.** College women in the nation's service. Journal of the Association of collegiate alumnae, 12: 7–11, October 1918.

1547. **Ettinger, William L.** The schools and the war. School, 30: 39, September 26, 1918.

An appeal for the cultivation of the highest idealism and to make the current events the core of instruction.

1548. **Gage, Nina D.** Organization of class work and student life at the Vassar training camp. American journal of nursing, 19: 18–22, October 1918.

Work at the "Nursing Plattsburgh."

1549. **Heffron, John L.** A report of a conference of the surgeon general with the deans of medical schools concerning medical education and the war, under the auspices of the Council on education of the American medical association. Journal of sociologic medicine, 19: 224–28, August 1918.

This conference, held in Chicago June 11, 1918, was attended by the representatives of about 70 medical schools.

1550. **James, Edmund Janes.** The college man and the war. Urbana, War committee of the University of Illinois [1918]. 10 p. 8°. (University of Illinois bulletin vol. XV, no. 50, August 12, 1918)

Commencement address, June 14, 1918.

1551. **Phillips, D. E.** The war and university reform. School and society, 8: 421–25, October 12, 1918.

Also in American education, 22: 60–64, October 1918.

1552. **Sanford, C. M.** War and the teacher. School news and practical educator, 32: 49–51, October 1918.

The problems of the teacher during these stirring war times.

1553. **Smith, Theodore Clarke.** The duty of the history teacher in forming public opinion during the war. Historical outlook (continuing History teacher's magazine) 9: 379–80, October 1918.

1554. **Swindler, R. Earl.** Study and teaching of the world war. Teacher's journal, 18: 149–55, October 1918.

Continued from September journal and to be concluded next month. Outlines a plan for teaching the world war.

1555. **Thwing, Charles F.** The colleges as war camps. Independent, 96: 12, 28, October 5, 1918.

Discusses the transformation in higher education that is now going on; the students' army training corps.

1556. **Wall, A. Dorothy.** What are we going to do with the war in the kindergarten? Kindergarten and first grade, 3: 320–22, October 1918.

A unit of work developed through the project method.

EDUCATIONAL THEORY AND PRACTICE.

1557. **Bobbitt, Franklin.** The curriculum. Boston, New York [etc.] Houghton Mifflin company [1918] 295 p. diagrs. 12°.

1558. **Cameron, Edward H.** Formal discipline past and present. Educational review, 56: 133–48, September 1918.

1559. **Lodge, *Sir* Oliver.** Humanistic science. Fortnightly review, n. s. 104: 209–17, August 1918.

Says that "in real education there should be no conflict or partition between science and letters."

1560. **Lott, Henry C.** The relation of education to the new democracy. American schoolmaster, 11: 301–11, September 15, 1918.

1561. **Moran, Francis T.** Education and democracy. Catholic educational review, 16: 132–38, September 1918.

Address delivered before the Catholic educational association, San Francisco, July 1918.

1562. **Washburne, Carleton W.** The formal discipline problem: three lines of attack. Sierra educational news, 14: 392–95, September 1918.

EDUCATIONAL PSYCHOLOGY: CHILD STUDY.

1563. **Armentrout, W. D.** Outline of the stages in the child's mental development. Education, 39: 90–101, October 1918.

1564. **Burnham, William H.** Astigmatism and brain work. [Worcester, Mass., 1918] p. 225–38. 8°.

Reprinted from the Pedagogical seminary, 25: 225–38, September 1918.

1565. **Pyle, W. H.** The relation of mental to physical development. Journal of delinquency, 3: 210–12, September 1918.

Study based on a recent experimental study of the school children of a Missouri county.

EDUCATIONAL TESTS AND MEASUREMENTS.

1566. **Hotz, Henry Gustave.** First year algebra scales. New York city, Teachers college, Columbia university, 1918. 87 p. tables, diagrs. 8°. (Teachers college, Columbia university. Contributions to education, no. 90)

1567. **Irwin, H. N.** A preliminary attempt to devise a test of the ability of high school pupils in the mental manipulation of space relations. School review, 26: 600–5, October 1918.

To be continued. Discusses space perception and visual imagery.

1568. **Proctor, William M.** The use of intelligence tests in the educational guidance of high-school pupils. School and society, 8: 473–78, 502–9, October 19, 26, 1918.

1569. **Reavis, W. C.,** *and* **Aikin, N. J.** The use of a score card in measuring handwriting. Elementary school journal, 19: 36–40, September 1918.

Says that the use of the score card in St. Louis indicates that it is more accurate than the scale in general scoring, with "the added advantage of providing specific suggestions for remedial instruction for those pupils for whom general practice does not produce reasonable and appreciable results."

1570. **Towne, Charles F.** Making a scale for the measurement of English composition. Elementary school journal, 19: 41–53, September 1918.

Discusses a plan put into operation by the schools of Providence, R. I.

SPECIAL METHODS OF INSTRUCTION.

1571. **Cather, Katherine Dunlap.** Educating by story-telling; showing the value of story-telling as an educational tool for the use of all workers with children. Yonkers-on-Hudson, N. Y., World book company, 1918. 396 p. 8°. (Play school series, ed. by C. W. Hetherington)

1572. **Windoes, Ralph F.** Visual instruction in the United States. Manual training magazine, 20: 40–44, October 1918.

Shows what the state departments, the federal government, colleges and universities, and commercial organizations are doing in furnishing lantern slides, etc., for educational purposes.

SPECIAL SUBJECTS OF CURRICULUM.

ENGLISH AND COMPOSITION.

1573. **Bair, F. H.** A new type of class book individualizing the teaching of English in secondary schools. English journal, 7:433-38, September 1918.

1574. **Smith, H. P.** Technical points in elementary English. Elementary school journal, 19:54-68, September 1918.

Presents statistics of a large number of courses of study for elementary schools "to determine the different points emphasized and the years of the course in which attention is focused upon a given point."

MODERN LANGUAGES.

1575. **Dunlap, Knight.** Value of German language assailed. Oklahoma school herald, 26:285-87, October 1918.

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Shows how the value of the German language has been overestimated, claims that it has no cultural value, and thinks that German should be offered in the high school, but not required.

1576. **Gay, P.-H.** Enseignement grammatical et enseignement empirique de la langue. Revue pédagogique, 72:393-410, June 1918.

Concludes a discussion of the grammatical and empirical methods of language teaching by suggesting a compromise between them which will avoid the extremes of both. Refers principally to the teaching of French.

1577. **Goblot, Germaine.** La guerre et l'enseignement des langues vivantes en Allemagne. Revue pédagogique, 72:411-31, June 1918.

Quotes from German periodicals some recent opinions of various German educators regarding the present and future teaching of English and French in Germany. The writer concludes that both languages will continue to be taught in Germany, but as an instrument of nationalism, with less impartiality than before the war.

1578. **Gordy, H. Miles.** The German language in our schools. Educational review, 56:257-63, October 1918.

Advocates the abandonment of the study of the German language in our schools, and the substitution for it of French.

ANCIENT LANGUAGES.

1579. **Green, T. Jennie.** A systematic study of English derivatives in connection with Latin in the high schools. Classical journal, 14:39-47, October 1918.

Says that a systematic study of derivatives should begin with the first lessons of the first year.

1580. **Litchfield, Henry W.** Latin and the liberal college. Classical journal, 14:6-25, October 1918.

Changes suggested for undergraduate courses in Latin. Presents a program for studies to be pursued by an intending teacher, etc.

1581. **MacKenzie, Flora.** Socializing Latin. Classical journal, 14:56-62, October 1918.

"How to make Latin pleasing and attractive to high school pupils."

1582. **Moore, Frank G.** Our common Latin heritage. Educational review, 56:230-54, October 1918.

1583. **Perkins, Albert S.** Latin as a utility. Educational review, 56: 117–32, September 1918.

A plea for emphasis upon English vocabulary building and consequently for a wider study of Latin in the secondary school, in vocational and general classes.

1584. **Snedden, David.** Liberal education without Latin. School review, 26: 576–99, October 1918.

Against the classics. Emphasizes the study of science, the fine arts, English, foreign languages, etc. Speaks of "a declaration of independence from the grip of the dead hand of Latin."

1585. **Ullman, B. L.** Latin in place of German. School and society, 8: 337–41, September 21, 1918.

Results of a questionnaire sent to teachers in schools and colleges of all types to ascertain the actual conditions with respect to the teaching of Latin and German.

GEOGRAPHY.

1586. **Nolan, Ona I.** Ways of raising geography teaching above the commonplace. Journal of geography, 17: 41–49, October 1918.

The writer tries to keep geography up to date by (1) Utilizing the experiences of the children, (2) Training powers of observation, (3) Choice of reading, (4) Use of newspaper clippings, (5) Pupil-teacher work, and (6) Use of maps and other materials.

SCIENCE.

1587. **Kirkwood, J. E.** Opportunity and obligation in botanical teaching. School science and mathematics, 18: 579–87, October 1918.

1588. **Packard, John C.** Science teaching. The college and the school. Journal of education, 88: 311–12, October 3, 1918.

"Some of the most suggestive sentences in a very remarkable paper read in February 1918."

PENMANSHIP.

1589. **Sawyier, Tom.** Manual of fundamentals in the teaching of handwriting in the public schools, prepared . . . under the direction of Francis B. Pearson, superintendent of public instruction. Columbus, O., The F. J. Heer printing co., 1918. 72 p. incl. front. (port.) illus. 8°.

MUSIC.

1590. **Chevais, Maurice.** La musique à l'école de demain. Grande revue, 22: 121–34, July 1918.

1591. **Clark, Frances Elliott.** Music in education. Normal instructor and primary plans, 27: 58, 69, 71, October 1918.

The larger part of a paper read at the General federation of women's clubs, Hot Springs, Ark.

Shows how music can serve education.

RURAL EDUCATION.

1592. **Joffe, Eva.** Rural school attendance in Alabama. Child labor bulletin, 7: 101–25, August 1918.

Results of an investigation undertaken by the National child labor committee, to ascertain the number and causes of absences among the school children of Alabama.

1593. **Oklahoma. Dept. of education.** Rural centralized, graded and model schools. Prepared by E. A. Duke, rural school supervisor, 1918. Issued by R. H. Wilson, state superintendent, Oklahoma. [Oklahoma City, *1918*] 89 p. illus., diagrs. 8°.

1594. ———. School survey suggestion; Alfalfa County, Grady County, Wagoner County, 1918. Prepared by E. A. Duke, rural school supervisor. Issued by R. H. Wilson, state superintendent of public instruction, Oklahoma. [Oklahoma City, 1918] 130 p. illus., maps. 8°.

SECONDARY EDUCATION.

1595. **Farrand, Wilson.** Readjustments in secondary education. Educational review, 56:192–98, October 1918.

Discusses the establishment of definite standards of attainment, and relating the processes of formal education more directly to the activities of life.

1596. The high school teacher from the viewpoint of the student. Educational foundations, 30:31–36, September 1918.

By a high school student.

Gives some opinions and criticisms of teachers by high school pupils.

1597. Secondary education in Latin America. Bulletin of the Pan American union, 47:276–82, August 1918.

A general sketch of the present status of secondary education in Latin American countries.

1598. **Strickland, V. L.** The junior high school. Kansas teacher, 7: 7–9, October 1918.

1599. **Thomas, P.-Félix.** Notes sur l'enseignement secondaire. Revue de Paris, 25:531–55, 626–45, June 1, August 1, 1918.

CONTENTS.—I. Caractères de l'enseignement secondaire.—II. L'administration du collège.—III. Les professeurs.—IV. Les répétiteurs.—V. Les élèves.—VI. L'inspection générale.—VII. Rapports des trois enseignements.

TEACHERS: TRAINING AND PROFESSIONAL STATUS.

1600. **Bradley, J. H.** A study of the relative importance of the qualities of a teacher and her teaching in their relation to general merit. Educational administration and supervision, 4:358–63, September 1918.

Gives a scale to guide in the rating of teachers.

1601. **Burk, Frederic,** *and* **Washburne, Carleton W.** The reorganization of normal school professional courses. School and society, 8:382–85, September 28, 1918.

The essential characteristics of the good teacher and the reorganization of normal courses so as to produce such teachers.

1602. **Burnham, Ernest.** Normal schools and rural teachers. American schoolmaster, 11:289–96, September 15, 1918.

Deals with some specific problems in rural-teacher preparation.

1603. **Curtis, Henry S.** Continuation schools for teachers. Educational review, 56:108–16, September 1918.

Gives examples of several continuation schools. Says " there should be some requirement in each State that every elementary teacher, within 10 or 12 years after she begins to teach, should secure an A. B. degree, that every high-school teacher should secure a Ph. D."

1604. ———. Recreation for teachers; or, The teacher's leisure time. New York, The Macmillan company, 1918. xvi, 288 p. plates. 12°. (Home and school series.)

Bibliography: p. 281–83.

1605. **Ennis, Isabel A.** Causes of the present shortage of teachers. School and society, 8:461–63, October 19, 1918.

Says low salaries will cause a serious dearth of teachers both now and after the war. Suggests remedies.

1606. **Furst, Clyde.** Insurance and annuities for college teachers. Educational review, 56: 215–29, October 1918.

Work of the Carnegie foundation and the Teachers insurance and annuity association of America.

1607. **Gt. Brit.** Departmental committee for enquiring into the principles which should determine the fixing of salaries for teachers in secondary and technical schools, schools of art, training colleges, and other institutions for higher education (other than university institutions). Report. Vol. I. London, H. M. Stationery off., 1918. 56 p. tables. 4°.

1608. **McIntyre, Clara Frances.** A venture in statistics. Journal of the Association of collegiate alumnae, 12: 1–7, October 1918.

Suggested by Elizabeth H. Haight's article on Pleasant possibles in lady professors published in the Journal of the Association of collegiate alumnae, September 1917. Results of investigations as to number and rank of women professors in coeducational universities and women's colleges. Says that more teaching positions are open to women in coeducational institutions than in women's colleges, and the tendency is toward a larger and fairer recognition of women's work.

1609. **National union of teachers.** Report for 1918 and List of members for the year 1917. London, The "Schoolmaster" publishing co., ltd. [1918] cxxiii, 644 p. 8°.

HIGHER EDUCATION.

1610. **Auerbach, Joseph S.** The university graduate of to-day. North American review, 208: 597–610, October 1918.

Portion of the commencement day address delivered at George Washington university, June, 1918. Discusses the university and idealism; attitude of the student towards life, etc.

1611. **Burling, Lancaster D.** The elective system and a table d'hote meal. School and society, 8: 402–6, October 5, 1918.

Read before the section of education, American association for the advancement of science, Pittsburgh, December 1917.

1612. **Caullery, Maurice.** Les universités américaines et la société. Revue internationale de l'enseignement, 38: 254–64, July–August 1918.

From M. Caullery's book, Les universités et la vie scientifique aux États-Unis. Paris, A. Colin, 1918.

Speaks of the manner in which American state universities and private universities supplement each other, of the loyalty of their alumni, and other supporters, etc.

1613. Demos and academe. Unpopular review, 10: 393–404, October–December 1918.

1614. **Lamy, Étienne.** L'université de Louvain. Revue des deux mondes, 47: 5–33, September 1, 1918.

1615. **Universities bureau of the British empire.** The universities of the United Kingdom of Great Britain and Ireland, a handbook. London, H. M. Stationery office, 1918. 64 p. 8°. ([Gt. Brit.] Board of education. Educational pamphlets, no. 33)

SCHOOL ADMINISTRATION.

1616. **Byrne, Lee.** The apportionment of funds in a combined city-and-county school system. American school board journal, 57: 35–36, 77, October 1918.

1617. **California.** State board of education. Committee of twenty-one on reorganization of public school system. Report of sub-committee on school administration. Sierra educational news, 14: 455–60, October 1918.

Alexis F. Lange, University of California, chairman of sub-committee.

1618. **Childs, H. G.** Reorganization in the grammar grades of Indiana public schools. Educator-journal, 19: 7–16, September 1918.

Comparison of the standards of the departmental school and the junior high school, cost comparisons, etc.

1619. **Deffenbaugh, W. S.** Recent improvements in city school administration. American school board journal, 57: 23–24, October 1918.

The present paper constituted the basis of an address before the Department of school administration, National education association, Pittsburgh, Pa., July 2, 1918.

1620. **Greeson, William A.** The school census and its use in school administration. Elementary school journal, 19: 14–23, September 1918.

Says that it is our duty "to so build up a curriculum for the seventh, eighth, and ninth grades that the child who leaves the school at the end of the ninth grade . . . will have some definite preparation for life while at the same time boys and girls who go on to the senior high school will have a good . . . preparation for the higher work."

1621. **Spaulding, Frank E.** Cooperation in school administration. School review, 26: 561–75, October 1918.

Emphasizes the necessity of securing a spirit of objective cooperation. Describes the methods in vogue in Chicago, New York, Boston, Los Angeles, Minneapolis, etc.

1622. **Williamson, I. L.** The relationship between boards of education and superintendents. American school board journal, 57: 31–32, October 1918.

From the superintendent's standpoint.

SCHOOL MANAGEMENT.

1623. **Gray, William S.** The work of elementary school principals. Elementary school journal, 19: 24–35, September 1918.

Says that "the most important single phase of the principal's work relates to the supervision and improvement of classroom teaching. Two methods are followed by progressive principals in evaluating classroom instruction: the first involves the measurement of the results of teaching and the second includes the observation and criticism of the methods employed by the teacher."

1624. **Hall-Quest, Alfred Lawrence.** The textbook; how to use and judge it. New York, The Macmillan company, 1918. xiv, 265 p. tables, forms, diagrs. 12°.

"References" at the end of each chapter.

1625. An individualist on discipline. Unpopular review, 10: 285–300, October-December 1918.

1626. **Kruse, Paul J.** The overlapping of attainments in certain sixth, seventh, and eighth grades. New York city, Teachers college, Columbia university, 1918. 91 p. diagrs. 8°. (Teachers college, Columbia university. Contributions to education, no. 92)

1627. **Lee, Joseph B.** Breaking the lock step. Educational review, 56: 149–57, September 1918.

Methods of achieving acceleration in public schools of New York city. Value of early recognition of bright pupils in high schools.

1628. **Washburne, Carleton W.** Breaking the lock step in our schools. School and society, 8: 391–402, October 5, 1918.

The meaning of individual instruction, plans that have been tried, and administrative problems to be met.

1629. **Young, Walter H.** School discipline. Education, 39: 73–78, October 1918.

Says that teaching personality, coupled with right ideals, is the greatest factor in securing discipline.

SCHOOL ARCHITECTURE.

1630. **Patterson, Herbert L.** Economy in schoolhouse construction. American school board journal, 57: 33–34, October 1918.

This paper was read before the National association of school accounting officers at Rochester, N. Y., May 22, 1918. The author has been engineer in charge of schoolhouse construction for the Boston Schoolhouse commission during the past ten years.

SCHOOL HYGIENE AND SANITATION.

1631. **Ayres, May.** Healthful schools; how to build, equip, and maintain them, by May Ayres . . . Jesse F. Williams . . . and Thomas D. Wood . . . Boston, New York [etc.] Houghton Mifflin company [1918] xii, 292 p. front., plates, plans. 12°. (Riverside textbooks in education, ed. by E. P. Cubberley)

Selected references at end of each chapter.

Sets forth what the authors feel a school administrator needs to know in order to safeguard the health of the children under his care.

1632. **Fidler, Thurba.** School lunches. Rural school messenger, 8: 8–15, September 1918.

A plan for a lunch box campaign in which the whole school and neighborhood may participate.

SOCIAL ASPECTS OF EDUCATION.

1633. **Kerby, C. Edith.** Wage earning school children in Detroit and Grand Rapids. Child labor bulletin, 7: 137–45, August 1918.

A study based on the findings of an investigation carried on in the winter of 1917–18 by the National Child labor committee for the Michigan child welfare commission.

Deals with age, occupations, hours of labor, compensation, etc.

1634. **McFee, *Mrs.* Inez Nellie.** The teacher, the school and the community. New York, Cincinnati [etc.] American book company [1918] 256 p. illus. (incl. plan) 12°.

1635. **Meigs, Grace L.** The children's year campaign. Chicago, American medical association, 1918. 11 p. 8°.

Reprinted from the Journal of the American medical association, vol. 71, pages 243–46, July 27, 1918.

Read before the section on diseases of children at the sixty-ninth annual session of the American medical association, Chicago, June 1918.

1636. **Smith, Walter R.** A program for socializing education. Educational review, 56: 199–214, October 1918.

Discusses the demands for a class cooperation between the schools and social welfare agencies.

1637. **Wilson, H. B.** Socializing the school. Sierra educational news, 14: 389–91, September 1918.

CHILD WELFARE.

1638. **Alden, Percy.** The state and the child. Contemporary review, 114: 237–53, September 1918.

Importance of the child as a national asset. Welfare and education of children in England.

9. **Gt. Brit. Local government board. Intelligence dept.** Infant welfare in Germany during the war. London, H. M. Stationery office, 1918. 37 p. tables. 8°.

0. **Slattery, Margaret.** The second line of defense; a plea for the men and women of to-morrow. New York, Chicago, Fleming H. Revell company [1918] 189 p. 12°.

The second line consists of the youth who remain, whose training is now in the hands of parents, teachers, churches, and employers. Makes a vigorous plea for the spiritual care and training of youth, calling parents and others to their duties.

MORAL EDUCATION.

1. **Engleman, James Ozro.** Moral education in school and home. Chicago, New York [etc.] B. H. Sanborn & co., 1918. 314 p. 12°.

2. **Ling, Ping.** Moral training of school children in war time. Pedagogical seminary, 25: 276–302, September 1918.

Discusses the ethical values of war from an educational point of view, and particularly those object lessons which are exerting a profound influence on the character and inner life of the children upon whose education and training the future of the world depends.

RELIGIOUS EDUCATION.

3. **Athearn, Walter S.** The organization of religious education within the community. Religious education, 13: 314–27, October 1918.

Paper read before the International Sunday school convention, Buffalo, N. Y., June 24, 1918. It covers the ground of the author's paper at the convention of the Religious education association in New York on March 5, 1918.

MANUAL AND VOCATIONAL TRAINING.

4. **Blumenthal, William R.** High school students' part-time employment that pays. Colorado school journal, 34: 17–19, September 1918.

Vocational facts about the East Denver high school for the school year 1917–18.

5. **Levitas, Arnold.** The teaching of printing in the high school. Industrial-arts magazine, 7: 336–39, September 1918.

Aims, methods of teaching, the course of study, equipment, and the product.

6. **Mays, Arthur B.** Manual training and vocational education. Manual training magazine, 20: 37–39, October 1918.

A plea for manual training. Gives a few simple facts to show that there is no inherent cause for antagonism between manual training and vocational education.

7. **National association of corporation schools.** Advance copy . . . sixth annual report . . . 1918. 6 v. 8°.

Report of committee on public education, 26 p. Report of committee on methods of instruction, 84 p. Report of committee on retail salesmanship, 20 p. Report of committee on executive training, 23 p. Report of committee on health education, 33 p. Report of committee on unskilled and semi-skilled labor, 23 p.

8. Office training at the R. H. Macy department store. National association of corporation schools bulletin, 5: 459–65, October 1918.

A description of the instruction given and the philosophy which is back of the training.

1649. **U. S. Federal board for vocational education.** Emergency war training for oxy-acetylene welders. June, 1918. Washington, Government printing office, 1918. 86 p. illus. plates. 8°. (Bulletin no. 11)

1650. ———. Emergency war training for radio mechanics and radio operators. September, 1918. Washington, Government printing office, 1918. 75 p. 8°. (Bulletin no. 16)

VOCATIONAL GUIDANCE.

1651. **Cohen, I. David.** Vocational and educational guidance in the school. Educational foundations, 30: 13–19, September 1918.

Some suggestions and a plan for educational and vocational guidance.

1652. **King, Charles A.** Vocational guidance: Part I. Educational administration and supervision, 4: 343–50, September 1918.

AGRICULTURAL EDUCATION.

1653. **Caswell, Lilley B.** Brief history of the Massachusetts agricultural college, semicentennial, 1917. Springfield, Mass., The F. A. Bassette co., printers [1917] 72 p. plates. 8°.

1654. **Chauveau,** ***Dr.*** L'enseignement professionnel et public de l'agriculture. Nouvelle revue (Paris) 36: 114–26, July 15, 1918.

1655. **Ullrich, F. T.** The farmer and agricultural instruction in the high school. Wisconsin journal of education, 50: 194–98, September 1918.

Discusses the lack of interest among farmers in agricultural instruction in the high schools, and suggests some ways and means for overcoming the apathy and indifference of the farmers.

HOME ECONOMICS.

1656. **Bradshaw, Grace.** The age for teaching housecraft in secondary schools. Journal of education (London) 50: 528–30, September 1918.

1657. **Taber, C. W.** The business of the household. Philadelphia and London, J. B. Lippincott company [1918] 438 p. illus. 8°. (Lippincott's home manuals, ed. by B. R. Andrews)

Higher life and cultural wants in the family budget: p. 358–79.

COMMERCIAL EDUCATION.

1658. **Stevens, Bertha.** Private commercial schools, Manhattan and the Bronx. [New York, The Public education association of the city of New York] 1918. 144 p. diagrs. 8°.

Report of the Committee to investigate private commercial schools.

CIVIC EDUCATION.

1659. **Alabama. Dept. of education.** Handbook of patriotic instruction for use in the schools of Alabama. Issued by the State department of education. Montgomery, Ala., Brown printing co., 1918. 151 p. diagr. 8°.

1660. **Cohen, I. David.** Teaching patriotism in the schools. Education, 39: 65–72, October 1918.

1661. **Libby, M. F.** Suggestions for the organization of a state for patriotic education, based upon experience in Colorado. Issued by the National security league . . . New York city, 1918. 54 p. 8°. (Patriotism through education series)

1662. **Ringdahl, M. Robert.** High school course in citizenship. School education, 38: 3–6, October 1918.

The content of a course in citizenship for the high schools.

MILITARY TRAINING.

1663. Courses in psychology for the students' army training corps. Psychological bulletin, 15: 129–36, April 1918.

Report of a sub-committee of the Research council, presenting suggestions and recommendations with respect to the content of the following three courses on the psychology of war for prospective officers: I. The study of human action. II. Educational psychology. III. The psychology of reasoning.

1664. **Hitch, A. M.** Military training in secondary schools. Mind and body, 25: 211–17, September 1918.

Read before the National association of secondary school principals, Atlantic City, February 26, 1918.

Does not approve of military training in the high schools.

1665. **Ling, Ping.** Military training in the public schools. Pedagogical seminary, 25: 251–75, September 1918.

Discusses first, laws and practices of military training in different school systems, and second, military drill versus broad physical education of semi-military character.

REEDUCATION OF WAR INVALIDS.

1666. **Duffy, Frank.** The re-education of our returning soldiers after the war. Educator-journal, 19: 71–75, October 1918.

Read before the National education association at Pittsburgh, Pa., by the general secretary of the United Brotherhood of carpenters and joiners of America.

1667. **Greener, George C.** Some aspects of rehabilitation work for disabled soldiers. Industrial-arts magazine, 7: 325–30, September 1918. illus.

Speaks particularly of conditions in Canada.

1668. **Morgan, Barbara S.** The returning soldier. North American review, 208: 524–35, October 1918.

Rehabilitation of the disabled soldier. Describes the machinery of reconstruction.

NEGRO EDUCATION.

1669. **Davis, Jackson.** County training schools. Southern workman, 47: 481–89, October 1918.

Describes the county training schools for negroes, in the Southern States—under the auspices of the Slater fund and the General education board. Illustrated.

1670. **Favrot, Leo M.** Aims and needs in negro public education in Louisiana. [Baton Rouge, La., 1918] 26 p. 8°. (Department of education, State of Louisiana. Bulletin no. 2, September 1918)

By the state agent of rural schools for negroes under direction of T. H. Harris, state superintendent.

1671. **Noble, Stuart Grayson.** Forty years of the public schools in Mississippi, with special reference to the education of the negro. New York city, Teachers college, Columbia university, 1918. 142 p. tables, diagrs. 8°. (Teachers college, Columbia university. Contributions to education, no. 94)

Bibliography: p. 137–38.

EDUCATION OF BLIND AND DEAF.

1672. **American association of instructors of the blind.** Twenty-fourth biennial convention, Colorado Springs, Colo., 1918. 75 p. 8°. (N. C. Abbott, secretary, Nebraska City, Nebr.)

Contains: 1. T. S. McAloney: The new education and its relation to and influence upon the education of the blind, p. 5–11. 2. Mabel R. Gillis: Library work for the blind in relation to the schools, p. 12–14. 3. Adelaide M. Carman: Musical training of the blind, p. 14–16. 4. J. T. Hooper: "Does the school curriculum deserve re-examination?" p. 21–23. 5. J. H. Hinemon: What degree of uniformity in courses of study in schools for the blind as respects elementary work is desirable? p. 24–26. 6. E. E. Bramlette: Relation of our courses to courses maintained in classes for seeing pupils in the public schools. p. 27–29. 7. G. F. Oliphant: Principles determining what a blind child shall be set to studying, p. 29–34. 8. Harold Molter: Relative importance of the cultural and the useful subjects as applied to high school programs, p. 35–38. 9. H. R. Chapman: What we ought to know about the child we try to teach, p. 38–42. 10. S. P. Hayes: Standard tests in elementary subjects in schools for the blind, p. 42–54. 11. R. B. Irwin: The public school sight-saving class, p. 58–60. 12. S. M. Green: Training the blind pupil for citizenship, p. 65–68.

1673. **Fitzgerald, Edith.** Language building in the primary grades. American annals of the deaf, 63: 342–53, September 1918.

Language work with the deaf. Says it should be started in the primary grades.

1674. **Wright, John D.** Working suggestions. American annals of the deaf, 63: 324–42, September 1918.

Education of the deaf; suggestions to parents and teachers.

EXCEPTIONAL CHILDREN.

1675. **Bridgman, Olga L.** Some special problems in abnormal adolescent psychology. Boston medical and surgical journal, 179: 505–10, October 17, 1918.

Reprinted from Archives of pediatrics, March 1918.

1676. **Claghorn, Kate Holladay.** Juvenile delinquency in rural New York. Washington, Government printing office, 1918. 199 p. 8°. (U. S. Children's bureau. Dependent, defective, and delinquent classes, series no. 4. Bureau publication no. 32)

1677. **Clark, Willis W.** A statistical study of 102 truants. Journal of delinquency, 3: 213–34, September 1918.

Also separately reprinted.

Study of the personal history, heredity, and environment of 102 boys who had been habitual truants prior to their commitment to Whittier State school, Whittier, California. Presents educational tests.

1678. **Hastings, George A.** Registration of the feeble-minded. Journal of psycho-asthenics, 22: 136–49, March and June 1918.

Writer says there are "four places in which many of the feeble-minded can be detected early in life—the home, school, juvenile court, and the reformatory. Of these the school is the most important so far as registration is concerned." Gives a tentative form of registration.

EDUCATION EXTENSION.

1679. **Coxen, James R.** The possibilities for evening school industrial classes under the Smith-Hughes act. Industrial-arts magazine, 7: 405–8, November 1918.

Discusses in a general way some of the essential factors involved in the establishment of evening school classes.

Finney, Ross L. Importing a German institution. School and home education, 38: 29–31, October 1918.

Argues that the continuation school is a German institution.

Gt. Brit. Ministry of reconstruction. Interim report of the Committee on adult education. Industrial and social conditions in relation to adult education. London, H. M. Stationery office, 1918. 32 p. 4°.

U. S. Federal board for vocational education. Evening industrial schools. September, 1918. Washington, Government printing office, 1918. 55 p. 8°. (Bulletin no. 18. Trade and industrial series no. 2.)

LIBRARIES AND READING.

Baldwin, Rachel. The school and the teaching of patriotism. Public libraries, 23: 361–63, October 1918.

Read before the School libraries section, American library association, Saratoga, July 5, 1918.

Relates to the service of the school library in teaching patriotism.

Horton, Marion L. The opportunity of the high school librarian. Western journal of education, 24: 1–2, September 1918.

Read at the California library association meeting, Del Monte, June 19, 1918.

Hunt, Clara Whitehill. The child and the book in war times. English journal, 7: 487–96, October 1918.

Read before the Library department of the National education association, at Pittsburgh, Pa., in July 1918.

Walter, Frank K. The war and library training. Library journal, 43: 728–32, October 1918.

Read before the professional training section of the American library association at Saratoga, July 5, 1918.

Shows the need of libraries for trained service, and the essential soundness of existing agencies for such training. Salaries must be made higher in order to attract library workers.

BUREAU OF EDUCATION: RECENT PUBLICATIONS.

The fall manual of the United States school garden army. Washington, 1918. 32 p.

Industrial arts in secondary schools in the war emergency. Washington, 1918. 31 p. (Secondary school circular, no. 4, September 1918)

The National council of primary education. Report of the second annual meeting at Kansas City, Mo., February 27, 1917, and the third annual meeting at Atlantic City, N. J., February 26, 1918. Washington, 1918. 35 p. (Bulletin, 1918, no. 26)

An outline of a course of study in gardening. Designed to prepare for supervision of school-directed home gardens under the plan of the United States School garden army. Washington, 1918. 12 p.

The training of teachers of mathematics for the secondary schools of the countries represented in the International commission on the teaching of mathematics; by Raymond Clare Archibald. Washington, 1918. 289 p. (Bulletin, 1917, no. 27)

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 40

RECENT STATE LEGISLATION
FOR
PHYSICAL EDUCATION

By

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., October 1, 1918.

SIR: With the great war has come a quickened appreciation in all nations of the value of physical education. In France a strong central committee has been formed to promote physical education. In England comprehensive and far-reaching provisions for physical education are incorporated in the new education law. In our own country eight States since 1915 have enacted laws providing for State-wide physical education.

It is certain that such legislation will be under consideration in many State legislatures in the immediate future. An analysis of the State laws already enacted and a summary of principles underlying effective State legislation for physical education have been prepared by Dr. Thomas A. Storey, State inspector of physical training, New York, and Dr. W. S. Small, the bureau's specialist in school hygiene and physical education.

I recommend that the manuscript transmitted herewith be published as a bulletin of the Bureau of Education.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

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RECENT STATE LEGISLATION FOR PHYSICAL EDUCATION.

PART I.

CHRONOLOGICAL ANALYSIS OF STATE LEGISLATION FOR PHYSICAL TRAINING.

Since June, 1915, eight States in this country have enacted physical education laws. The order of adoption is as follows: Illinois, June 26, 1915; New York. May 15, 1916; New Jersey, March 23, 1917; Nevada, March 21, 1917; Rhode Island, April 19, 1917; California, May 26, 1917; Maryland, 1918; Delaware, April 10, 1918.

In most instances the initial impulse to these State laws for physical education was interest in military preparedness, and took the form of bills for military training of high-school boys. Investigation and deliberation resulted in convincing the legislators that military training for high-school boys was less valuable even as a measure for military preparedness than a sound system of physical education. With one exception, therefore, all of these States enacted laws providing for compulsory physical education of all of its school children. The Nevada law is for high schools only.

In six other States legislative attention has been given to this question, but as yet legislation has not been enacted. These States are: Massachusetts, Connecticut, Pennsylvania, Nebraska, Ohio, and Colorado.

ILLINOIS.

The Illinois law antedates all the others. It provides for physical training in all of the public schools and in all of the normal schools of the State. Apparently, no special provision has been made in that State for the operation of the law; no appropriation for the development of a program or the publication of a syllabus; and no resources for the employment of State supervisors, inspectors, or other administrators of physical education. It appears that the people of the State are not satisfied with the law, and that efforts have been made to amend it so that it may serve a more useful purpose.

NEW YORK.

The New York law, approved May 15, 1916, and amended at the legislative session of 1918, provides that:

> All male and female pupils, above the age of 8 years, in all elementary and secondary schools of the State, shall receive, as a part of the prescribed courses of instruction therein, such physical training under the direction of the commissioner of education as the regents, after conference with the military training commission, may determine, during periods which shall average at least 20 minutes each day. * * * Similar courses of instruction shall be prescribed and maintained in private schools of the State, and all pupils in such schools above 8 years of age shall attend upon such courses; and if such courses are not so established and maintained in any private school, attendance upon instruction in such school shall not be deemed substantially equivalent to instruction given to children of like ages in the public school or schools of the city or district in which the child resides.

The administration of this law in the State of New York is a function of the regents of the University of the State of New York, that is, of the State department of education. A bureau of physical training has been established as a subdivision of the State military training commission. The State inspector of physical training, the chief officer of this bureau, is required, in accordance with the law, to observe and inspect the work and methods described under the provisions of the education law relating to instruction in physical training. The State law in New York also provides that all public schools in the State employing special teachers of physical training, qualified and duly licensed under the regulations of the regents, may receive financial support from the State to the extent of half the salary of each teacher so employed, provided that half the salary does not exceed $600, and the law further requires that:

> The board of education or trustees of every school district in a city, and every union free school district regularly employing 10 or more teachers, shall employ a teacher or teachers qualified and duly licensed under the regulations of the regents to give such instruction; in every other district of the State they shall require such instruction to be given by the teacher or teachers regularly employed to give instruction in other subjects or by a teacher or teachers qualified and duly licensed under the regulations of the regents.

At the last session of the legislature, 1918, the sum of $60,000 was appropriated for the purpose of enabling the education department of the State to provide for the supervision and special instruction in physical training of teachers of other subjects who are assigned or designated, as required by law, to give instruction in physical training.

Pursuant with the enactments of 1916, the regents of the University of the State of New York and the military training commission of that State produced jointly a State Program and Syllabus of

Physical Training, which in published form covers about 300 printed pages. In this program and syllabus, physical training is interpreted as covering—

> (1) Individual health examination and personal health instruction (medical inspection); (2) instruction concerning the care of the body and concerning the important facts of hygiene (recitations in hygiene); and (3) physical exercise as a health habit, including gymnastics, elementary marching and organized supervised play, recreation, and athletics.

For the direction and supervision of the State program there is a force of inspectors, consisting of a State inspector of physical training and nine assistant inspectors.

The program and syllabus now operating in the State of New York require six hours a week in physical training for every pupil who comes under the provision of the law.

NEW JERSEY.

The physical education law of New Jersey requires that:

> There shall be established and made a part of the courses of instruction in the public schools of this State (New Jersey) what shall be known as "a course in physical training." Such a course shall be adapted to the ages and capabilities of the pupils in the several grades and departments and shall include exercises, calisthenics, formation drills, instruction in personal and community health and safety and in correcting and preventing bodily deficiency, and such other features and details as may aid in carrying out these purposes, together with instruction as to the privileges and responsibilities of citizenship, as they relate to community and national welfare, with special reference to developing bodily strength and vigor and producing the highest type of patriotic citizenship; and in addition, for female pupils, instruction in domestic hygiene, first aid, and nursing. To further promote the aims of this course any additional requirements or regulations as to medical inspection of school children may be imposed.

The New Jersey law prescribes that the State commissioner of education, with the approval of the State board of education, shall prepare a course in physical training in compliance with the State law and that experts may be employed to assist him in preparing such courses of instruction and in putting those courses into operation in the public schools of the State.

All children physically fit and capable of doing so are required to take the course in physical training as provided by the State legislature, and such course is made by law a part of the curriculum prescribed for the several grades, and it specifies that the conduct and attainment of the pupils shall be marked as in other courses or subjects, and the standing of the pupil in connection therewith shall form a part of the requirements for promotion or graduation.

The time requirement in New Jersey is "at least 2½ hours in each school week."

The law further requires that all students in the State normal schools of New Jersey shall receive thorough instruction in physical training, and that such instruction shall be provided for all students in attendance at the State summer schools as shall elect to take such instruction.

Instruction in courses of physical training in New Jersey are subject to the general supervision and direction of the commissioner of education, who is authorized by act of the legislature to appoint such expert assistants as in the opinion of the State board of education shall from time to time be necessary to carry out the purposes of the State law.

Local boards of education are authorized to raise money for the support of the local expense attending upon operating the State law of physical training, but no special provision is made by the legislature of the State of New Jersey for State support in local school systems; the general laws governing the distribution of money regarding apportionment to teachers is effective in the case of physical training supervisors and teachers.

The original bill provided the sum of $10,000 for the purpose of enabling the State commissioner of education and the State board of education to carry out its provisions, and made it a law that the sum of $12,000 be provided in the annual appropriation bill for that purpose for the year 1918.

Pursuant with the provisions of this law, the commissioner of education and the State board of education of New Jersey have produced and published a State Program and Syllabus of Physical Education.

NEVADA.

The physical training law for the State of Nevada was approved on March 21, 1917. This act reads in part as follows:

> SECTION 1. It is hereby made the duty of all school officers in control of public high schools in the State of Nevada to provide for courses of instruction designed to prepare the pupils for the duties of citizenship, both in time of peace and in time of war. Such instruction shall include:
>
> (1) Physical training designed to secure health, vigor, and physical soundness of the pupil; (2) instruction relative to the duties of citizens in the service of their country. It shall be the aim of such instruction to inculcate a love of country and a disposition to serve the country effectively and loyally.
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> SEC. 2. All boards of education or boards of school trustees of county or district high schools offering a four years' high-school course are hereby empowered to employ teachers of physical training who shall devote all or part of their time to physical instruction for both boys and girls.
>
> SEC. 3. In order to assist in the payment of salaries of said physical training instructors, there shall be levied on the passage of this act an ad valorem tax of 5 mills on the $100 of assessed valuation of all the taxable property of the State.

The superintendent of education for the State of Nevada has issued a program and syllabus for physical training, pursuant with the provisions of this law.

This Nevada law has the advantage of providing an assured income through its ad valorem tax for the assistance of the various high schools and the payment of salaries of their teachers of physical training. It apparently does not provide any administrative machinery whereby the State superintendent of public instruction may more effectively direct, supervise, and inspect the operation of the State Program of Physical Education. The law unfortunately leaves out of consideration the elementary schools of the State, in which physical training is even more important than in secondary schools. This deficiency is met in part at least through the authority of the State department of education, which has made physical training a requirement in the elementary schools of the State.

RHODE ISLAND.

On April 19, 1917, the governor of the State of Rhode Island approved a law to provide physical training for school children, which reads as follows:

> All children above the age of 8 years, attending public schools or such other schools as are managed and controlled by the State, shall receive therein instruction and the practice in physical training under such regulations as the State board of education may prescribe or approve during periods which shall average at least 20 minutes in each school day. No private school or private instruction shall be approved by any school committee * * * as substantially equivalent to that required by law of a child attending a public school in the same city and town unless instruction and practice in physical training similar to that required in the public school shall be given.
>
> For the purpose of preparing and introducing such course of instruction, the sum of $500, or such sum thereof as may be necessary, is hereby appropriated.

Pursuant with this act of the legislature the State board of education has issued a syllabus for physical education in the schools of Rhode Island.

This syllabus is concerned with (1) the provision of the health and sanitary environment of pupils; (2) a personal health examination and instruction for each pupil at least once a year by a physician and specialist and daily inspection by the parent and teacher; (3) class instruction concerning the important facts of physiology and hygiene for all children and all grades; (4) exercises including such motor activities as marching, gymnastics, and supervised play and recreation.

The general plan and syllabus of physical education for the schools of Rhode Island cover 110 printed pages.

There seems to have been no provision made in this law for the expense of enforcing this requirement in physical education by the board of education in the State of Rhode Island; no provision for State support of local school systems or for the employment of special teachers; and no provision for administrative machinery for supervision, direction, or inspection of the operation of the law. Unless some such support is given, the probabilities are that the law will not be particularly productive in Rhode Island.

The physical education law will be codified with other laws dealing with provisions for the safety and health of school children. The law is mandatory, has been put into effect, and is being complied with throughout the State. It is to be regretted that a section of the original bill carrying an annual appropriation for special State supervision and inspection was not enacted into law. A State supervisor devoting full time to supervision and inspection could do much to accelerate progress.

CALIFORNIA.

On May 26, 1917, an act providing for physical education became a law in the State of California.

This law provides that the school authorities in the public schools of the State, elementary and secondary, shall prescribe suitable courses of physical education for all pupils, except such as may be excused from such training on account of physical disability.

The California law makes it a duty of the superintendent of schools in every county and city, and of every board of education, board of school trustees, and high-school board, to enforce the courses of physical education prescribed by the proper authority, and to require that such physical education be given in the schools under their jurisdiction or control.

In the elementary schools the time requirement in California shall "average 20 minutes in each school day," and in the secondary schools "at least two hours each week while that school is in session."

This law requires that, if the number of pupils in a given school system is sufficient, there shall be employed a competent supervisor or such special teachers of physical education as may be necessary. The enactment further specifies that the State board of education shall require a course in physical training in all the normal schools of the State and provides that the State board of education shall prescribe a course in physical education for such schools and shall make the completion of such course a requirement for graduation.

Under this law, it is the duty of the State board of education—

(1) To adopt such rules and regulations as it may deem necessary and proper to secure the establishment of courses in physical education in the elementary and secondary schools in accordance with the provisions of this act; (2) to appoint a State supervisor of physical education * * * ; (3) to compile, or cause to be compiled or printed, a manual in physical education for distribution to teachers in the public schools of the State.

The sum of $10,000 was appropriated for the purpose of carrying out the provisions of the California law.

The preliminary program indicates that the State supervisor will produce for that State a thorough and carefully developed curriculum. The present emphasis in California seems to be directed toward the training of teachers, which is without doubt the most important factor in the successful development of a State-wide program of physical education.

The chief handicap of the California plan is the inadequate financial support, unless the legislature does better than $10,000 a year for the supervision, direction, and administration of physical education throughout the State.

MARYLAND.

The physical training act, which is now a law in the State of Maryland, was introduced before the senate of that State on March 22, 1918.

This law reads in part as follows:

> 1. There shall be established and provided in all the public schools of this State, and all schools maintained or aided by the State, physical education and training for pupils of both sexes during the following minimum periods: A. In the elementary public schools at least 15 minutes in each school day and also at least one hour of directed play outside of regular classroom work in each school week. B. In public high schools at least one hour in each school week and also at least two hours of directed play or athletics for all pupils outside of regular classroom work in each school week.

The law of Maryland provides for the appointment of a supervisor of physical education whose duties shall be to direct and carry out the provisions of the State law under the direction of the State superintendent of schools. The State board of education is further authorized and directed to appoint such other assistants, both clerical and professional, as may be recommended by the State superintendent of schools as necessary in the administration and surpervision of physical education.

The law further provides that the State supervisor of physical education immediately after his appointment shall organize his work and shall formulate the necessary and proper plans, courses, and regulations for carrying out the provisions in the State law for physical training.

In view of the great resources which Maryland possesses in its highly trained and public-spirited citizens prominent in the health educational movements of our Nation, it is to be expected that Maryland will produce an effective and far-reaching plan for the physical education of her school children.

tion as to the privileges and responsibilities of citizenship, as they relate to community and national welfare, with special reference to developing bodily strength and vigor, and producing the highest type of patriotic citizenship, and in addition, for female pupils, instruction in domestic hygiene, first aid, and nursing."

Nevada.—"SECTION 1. It is hereby made the duty of all school officers in control of public high schools in the State of Nevada to provide for courses of instruction designed to prepare the pupils for the duties of citizenship, both in time of peace and in time of war. Such instruction shall include: (1) Physical training designed to secure the health, vigor, and physical soundness of the pupil; (2) instruction relative to the duties of citizens in the service of their country. It shall be the aim of such instruction to inculcate a love of country and a disposition to serve the country effectively and loyally."

Rhode Island.—No reference to purpose in the act but the syllabus of the State department of education states: "Physical education may be defined as including healthful, sanitary environment; medical inspection; instruction in physiology and hygiene; and exercise in the form of such motor activities as marching, gymnastics, dancing, supervised play, and athletics." "The general aim of physical education is social efficiency, which includes such specific aims as organic health and vigor, normal physical development, freedom from physical defects, efficient motor control, grace, agility, endurance, and general physical fitness; alertness, courage, judgment, initiative, imagination, obedience, honesty, unselfishness, cooperation, and loyalty."

II. SCOPE.

Included in this term, as shown by the several acts, are the following items:

1. PRESCRIPTION OF AGE OR GRADE LIMITS.

New York.—All male and female pupils above the age of 8 years in all elementary and secondary schools. (Including private schools.)

California.—All pupils enrolled in the elementary schools except pupils who may be excused on account of physical disability; and all high-school pupils except pupils regularly enrolled in high-school cadet companies and pupils excused on account of physical disabilities. By implication all normal school students are included.

New Jersey.—Every pupil, excepting kindergarten pupils, attending public schools of this State, including normal schools, in so far as he or she is physically fit and capable of doing so, which fitness shall be determined by the medical inspector, shall take the course in physical training, and such course shall be part of the curriculum prescribed for the several grades.

Illinois.—All children in all grades in all schools supported wholly or in part by the State, including normal schools.

Maryland.—All pupils of all grades in all schools maintained or aided by the State.

Nevada.—High-school pupils only.

Rhode Island.—All children above the age of 8 years attending public schools or such other schools as are managed and controlled by the State.

2. CREDIT AND GRADUATION.

California.—Completion of such course is a requirement for graduation.

New Jersey.—Conduct and attainment of the pupils shall be marked as in other courses or subjects, and the standing of the pupils in connection therewith *shall form* part of the requirement for promotion and graduation.

3. TIME REQUIREMENTS.

New York.—Periods shall average at least 20 minutes per day.

California.—Periods shall average 20 minutes per day for elementary schools and at least 2 hours each week for secondary schools.

New Jersey.—Time shall aggregate at least 2½ hours in each school week.

Illinois.—Not less than 1 hour of each week during the whole of the school year.

Maryland.—In the elementary public schools at least 15 minutes in each school day and also at least 1 hour of directed play outside of regular classroom work in each school week.

In public high schools, at least 1 hour in each school week and also at least 2 hours of directed play or athletics for all pupils outside of regular classroom work in each school week.

Rhode Island.—Shall average at least 20 minutes in each school day.

4. AUTHORITY PRESCRIBING COURSES.

New York.—The regents, after conference with the military training commission.

California.—The State board of education.

New Jersey.—Prepared by the State commissioner of education and approved by the State board of education. May employ experts to assist.

Delaware.—The character and method of physical training from time to time shall be as prescribed by the State board of education. A "Physical Training Commission" is created to "devise a system of physical training, and inaugurate the same in the schools of the State subject to the direction of the State board of education." "The functions of said commission shall cease when a system of physical training shall have been inaugurated."

Illinois.—Local boards of education.

Maryland.—State supervisor of physical education, under direction of State superintendent, with approval of State board of education.

Nevada.—Local boards of education.

Rhode Island.—State board of education.

5. AUTHORITY ENFORCING COURSES.

New York.—State commissioner of education.

California.—State board of education.

New Jersey.—State commissioner of education.

Delaware.—State board of education.

Illinois.—Local boards of education.

Maryland.—State board of education.

Nevada.—Local boards of education.

Rhode Island.—State board of education.

6. SUPERVISION.

New York.—State military commission may appoint and at pleasure remove an inspector of physical training at a salary not exceeding $5,000 a year and other assistants, clerks, and employees at salaries to be fixed by the commission.

California.—The State board of education shall appoint a State supervisor of physical education at a salary not exceeding $3,600; and, within the limits of the appropriation provided, may employ such expert and clerical assistance as may be necessary to carry out the provisions of the act.

New Jersey.—State commissioner of education has general supervision and direction. He shall appoint such expert assistants as in the opinion of the State board of education shall from time to time be necessary to carry out the purpose of the act.

Delaware.—No provision other than State board of education.

Maryland.—The State board of education, upon recommendation of the State superintendent of schools, shall appoint a supervisor of physical education whose duty it shall be to direct and carry out the provisions of this act under the direction of the State superintendent of schools.

7. DUTIES OF STATE SUPERVISOR OF PHYSICAL EDUCATION.

New York.—Not specified. Assigned by State military commission.

California.—To have general supervision. Shall exercise general control over all athletic activities of the public schools. Shall advise school officials, school boards, and teachers in matters of physical education. Shall visit and investigate the work in physical education.

Maryland.—To direct and carry out the provisions of the act. Shall formulate the necessary and proper plans, courses, and regulations for carrying out the provisions of the act.

8. LOCAL SUPERVISION.

New York.—No specific provision, except that special teachers of physical training are authorized. In the amendment of 1918, it is provided that the education department may provide for the supervision and special instruction in physical training of teachers regularly employed to give instruction in other subjects who are assigned, under the terms of the act, to give instruction in physical training.

California.—When the number of pupils in any school district or municipality is sufficient, there shall be employed a "competent supervisor and such special teachers of physical education as may be necessary."

9. PROVISIONS AS TO TEACHERS.

New York.—"When the number of pupils in the city or school district * * * is sufficient" there shall be employed "a competent teacher or teachers to give such instructions." "The trustees or boards of education of two or more contiguous districts in the same supervisory district, when authorized or directed by the commissioner of education may join in the employment of a competent teacher." The amendment of 1918 clarifies and improves the provision as follows: The board of education or trustees of every school district in a city and every union free school district *regularly employing 10 or more teachers* shall employ a teacher or teachers *qualified and duly licensed* under the regulations of the regents to give such instructions; in every other district of the State, they shall require such instruction to be given by the teacher or teachers regularly employed to give instruction in other subjects or by a teacher or teachers qualified and duly licensed under the regulations of the regents. Contiguous districts may join forces.

California.—Essentially the same as New York provision before amendment. No definition of "sufficient" number or of "competent" teacher but the provision for joint employment by contiguous districts is purely permissive and no discretion to direct such union is lodged with any authority above the local authorities concerned.

New Jersey, Illinois, Maryland, Rhode Island.—No provision for special teachers. Power is implicit in general school law.

Nevada.—Employment of special teachers of physical training is authorized in all high schools offering a four-year high-school course. They shall devote all or part of their time to physical instruction for both boys and girls.

10. QUALIFICATIONS AND PREPARATION OF TEACHERS.

(Special teachers and regular teachers.)

New York.—Special teachers must be qualified and duly licensed under the regulations of the regents.

First paragraph of item 7 (above) authorizes the State department of education to make provision for the special instruction in physical training of regular teachers assigned to teach physical training.

California.—The State board of education, in standardizing the courses of instruction offered in the several normal schools of the State, shall prescribe a course in physical education and shall make completion of such a course a requirement for graduation.

New Jersey.—The State board of education shall adopt regulations fixing the necessary qualifications of teachers in physical training, and shall require all students at the State normal schools to receive thorough instruction in such courses, and shall provide such instruction for such students in attendance at the State summer schools as may elect to take such instruction.

Illinois.—The curriculum in all normal schools of the State shall contain a regular course of physical education and training for teachers.

Nevada.—Provides for specially licensed teachers of physical training.

11. RELATION TO MEDICAL INSPECTION.

No specific reference to medical inspection except in New Jersey law, where it is written: "To further promote the aims of this course (physical training), any additional requirements or regulations as to medical inspection of school children may be imposed;" and "physical fitness (for physical training) shall be determined by the medical inspector."

In New York, California, and Rhode Island, however, medical inspection in the sense of medico-physical examination, preventive hygiene, and corrective follow-up work are assumed in the administration of the law as essential conditions to effective physical training.

12. FINANCIAL SUPPORT.

All make appropriations for expenses of administration. New York and Nevada only provide for State subsidies to local boards.

New York.—The commissioner of education shall apportion to each city and school district in which physical training is maintained a sum equal to one-half the salary paid to each special teacher of physical training; provided, "that the entire amount apportioned on account of a single teacher during a school year shall not exceed $600;" and provided further, that the courses of instruction and the instruction are approved by the commissioner of education as meeting the standards prescribed and as conforming to the law and the regulations of the regents.

Nevada.—In order to assist in the payment of salaries of physical-training instructors, there is levied a special ad valorem tax of 5 mills on the hundred dollars. The apportionment is made by the State superintendent of public instruction on the basis of $300 for each 100 pupils or fraction thereof enrolled in any high school partaking of the benefits of the act.

18. RELATION TO MILITARY TRAINING.

New York.—The military training commission performs two functions relative to physical training:

(1) Appoints State physical training supervisor and assistants.

(2) Advises and confers with the board of regents as to courses of instruction in physical training and as to preparation for the duties and obligations of citizenship.

The military-training commission prescribes and directs military training for boys between 16 and 19 years of age.

California.—"Pupils regularly enrolled in high-school cadet companies" are exempted from prescribed physical training.

New Jersey.—If the State board of education or any school district or municipality shall determine that the course in physical training as prescribed for male pupils in the high schools shall include military training, such a course shall be prepared by the commissioner of education and the adjutant general and be a part of the course of physical training for male pupils. All male pupils in the high school shall be required to take this course, excepting boys physically unfit, as determined by the medical inspector, or whose parents may have conscientious scruples against military training.

Provision is made for each school district to decide by referendum upon the inclusion of military training in the event that the State board of education does not include military training in the course in physical training.

Nevada.—Section 1 shows that this act was adopted in lieu of military training in the high schools. It is designed to provide a physical training that shall be preparatory to military training or civic efficiency.

PART III.

PRINCIPLES GOVERNING STATE LEGISLATION FOR PHYSICAL EDUCATION.

The enactment of an adequate and effective State law for physical education requires a clear understanding of three things: The objects to be secured through physical education; the processes and accessories necessary for securing these objects; the specific provisions that must be incorporated in the legislative measure.

I. Obviously the object of a State law for physical education is to secure the development of the potential physical capacity of the boys and girls of the State; to make them physically, morally, and socially fit for the duties of citizenship and the joy of wholesome living. Quite as obviously, no system of education, however broadly conceived, can do this single-handed. Education is but one of the social agencies involved in the successful upbringing of youth. Good housing, adequate food, and sane regulation of juvenile labor are equally necessary. Without these cooperative conditions, any system of physical education can be only partially successful in its appointed task of developing the physical capacity of the youth of the State; but an adequate and effective system of physical education will surely stimulate the development of these other agencies in a State.

II. The processes and accessories by which the development of physical capacity may be classified with sufficient accuracy as follows:

1. Processes.

(*a*) Sufficient physical activity of the right character to insure development of strength, endurance, agility, and trained control of the muscular powers; and the moral and social qualities of courage, self-control, self-subordination, cooperation, and initiative.

(*b*) Training into health habits and instruction in health knowledge in order that the individual may know how to take care of his "animal machine" and may reverence it as a servant for high purposes.

2. Accessories.

(*a*) Physical examination—the charting, as it were, of each individual's physical character—repeated at sufficiently frequently intervals to secure a record of growth and physical status.

(*b*) Provision for correction of deficient bodily conditions that impair health and development.

(*c*) Adequate space and equipment for exercise appropriate to varying ages and varying physical and mental status of children and youth.

(*d*) Sanitary school environment, including buildings, grounds, and equipment.

(*e*) Organization and management of the daily school program and methods of instruction in the interest of health and vigor.

III. The legislative provision necessary to an effective State system of physical education will include the following:

1. A clear statement of the purpose and subject of the law (see N. Y., N. J., Cal., R. I.).

2. Provision of administrative machinery in the State department of education sufficient for the effective administration of the law. This provision should be broad and flexible. Two things are essential—

(*a*) State direction and supervision. The best plan is a State director of physical education with the rank of deputy or assistant State superintendent. His powers and duties must not be narrowly defined. (N. Y., Cal., Md.)

(*b*) Sufficient financial resources to insure the effective administration of this office, either by specific appropriation or by authorizing the State department to make adequate appropriation for this purpose out of the general school funds.

3. Provision for the continuous physical education of all children and youth of school age (6–18) in the State.

(*a*) All children in all grades and departments of the public schools.

(*b*) All children in institutional and private schools. (N. Y., R. I.)

(*c*) All students in normal schools and other schools in which teachers are trained. (N. J., Cal.)

(*d*) All boys and girls of school age in industry. This may be secured by extending the continuation school program so as to make physical education obligatory up to 18; or it may be secured by recognizing and crediting such agencies as municipal playgrounds, boy scouts, Young Men's Christian Association. Attempts at precise definition in the law should be avoided. It should be left as an administrative problem under general authorization. (N. Y.)

4. A minimum time requirement for physical education of one hour each day. It should be explicit that this is the minimum and that school authorities are encouraged to increase the time devoted to play, recreation, and athletics outside the regular school hours. For

hildren in the higher grades and in industry, activities that are pproved by the State director of physical education as equivalent to rescribed courses in physical education should be accepted as fulfill-ng, in whole or in part, the time and quality requirements in physical ducation.

5. There should be a carefully drawn provision authorizing and equiring the employment of supervisors and special teachers under pecified conditions and in harmony with the administrative organi-ation of the State. A State with a county unit organization would equire county supervisors; one with supervisory districts would re-uire district supervision. City systems would require both super-isors and special teachers—the latter for intermediate and high chools at least. By specified conditions is meant that a supervisor hould be required for a given unit of school population, the size f the unit to depend upon density of population.

6. Provision for State aid to county and local authorities in part ayment of the salaries of supervisors and special teachers. (N. Y., Nev.).

7. Provision requiring the State department of education to fix ualifications of supervisors and special teachers and to issue special icenses for the same.

8. Provision for adequate physical education in the preparation of ll teachers both for the secondary and the elementary school. The ssential requirements of this part of the teachers' education should e prescribed by the State authorities.

9. Special provision for training regular class teachers already in he service in order that they may do their essential part in the rogram of physical education (N. Y., N. J.).

10. Provision requiring that pupils be graded in physical education s in other school subjects and exercises and that satisfactory progress n physical education be a condition to promotion and graduation. (N. J., Cal.).

11. Effective provision for coordinating medical and sanitary supervision of schools with the physical education. Otherwise such essential factors in a complete program of physical education as de-tection and correction of defects and sanitary conditions of grounds, buildings, and equipment will be neglected. Most States having medical inspection laws will need to revise and extend them. In States having no such laws the enactment of medical inspection and physical education laws should be worked out so as to insure effective coordination.

12. If, as in some of the laws already enacted, reference is made to military training, the interrelations should be clearly recognized. A system of physical education worthy the name must include all the

essentials of premilitary training: development of sound physical condition, training in care of one's physical self, training in co-operation, respect for discipline. Drill in tactics and the manual of arms can not be accepted as a substitute or equivalent for the course in physical education. If military training is authorized in the law, then the State director of physical education should be authorized and required to pass upon the value of any proposed plan of military training and to accept it as substitute for physical education only in so far as it includes the health, vigor, and endurance producing features of the physical education program.

PART IV.

COPIES OF STATE LAWS FOR PHYSICAL EDUCATION.

THE STATE OF ILLINOIS.

SECTION 1. *Be it enacted by the people of the State of Illinois, represented in the General Assembly*: That it shall be the duty of boards of education and of all boards in charge of educational institutions supported wholly or partially by the State to provide for the physical education and training of pupils of such public schools and educational institutions in all grades, and to include such physical education and training in the courses of instruction regularly taught therein.

SECTION 2. All boards of education and managing boards of such educational institutions shall make proper and suitable provisions in the schools and institutions under their jurisdiction for such physical education and training for not less than one (1) hour of each week during the whole of the school year.

SECTION 3. The curriculum in all normal schools of the State shall contain a regular course of physical education and training for teachers, the said course to be taught not less than one (1) hour of each week during the whole of each term of school.

Approved June 26, 1915.

THE STATE OF NEW YORK.

Law of 1916, as amended in 1918.

SECTION 695. *Instruction in physical training and kindred subjects.*—All male and female pupils above the age of 8 years in all elementary and secondary schools shall receive as part of the prescribed courses of instruction therein such physical training under the direction of the commissioner of education as the regents after conference with the military training commission may determine, during periods which shall average at least 20 minutes in each school day. Pupils above such age attending the public schools shall be required to attend upon such prescribed courses of instruction.

The board of education or trustees of every school district in a city and every union free school district regularly employing 10 or more teachers shall employ a teacher or teachers qualified and duly licensed under the regulations of the regents to give such instruction; in every other district of the State they shall require such instruction to be given by the teacher or teachers regularly employed to give instruction in other subjects or by a teacher or teachers qualified and duly licensed under the regulations of the regents. The boards of education or trustees of two or more contiguous districts in the same supervisory district, however, may join in the employment of a teacher qualified and duly licensed under the regulations of the regents to give such instruction; and the salary of such teacher and the expenses incurred on account of such instruction shall be apportioned by the district superintendent among such districts according to the assessed valuation thereof, and as so apportioned shall be a charge upon each of such districts. Similar courses of instruction shall be prescribed and maintained in private schools in the State, and all pupils in such schools over 8 years of age shall attend upon such courses; and if such courses are not so established and maintained in any private school, attendance upon instruction in such school shall not be deemed substantially equivalent to instruction given to children of like ages in the public school or schools of the city or district in which the child resides.

Whenever the regents shall adopt recommendations of the military training commission in relation to the establishment in elementary and secondary schools of habits, customs and methods adapted to the development of correct physical posture and bearing, mental and physical alertness, self-control, disciplined initiative, sense of duty and spirit of cooperation under leadership, as provided in the military law, the regents shall prescribe and enforce such rules as may be necessary to carry into effect the recommendations so adopted.

SECTION 696. *Rules of regents.*—It shall be the duty of the regents to adopt rules determining the subjects to be included in courses of physical training provided for in this article, the period of instruction in each of such courses, the qualifications of teachers, the attendance upon such courses of instruction, and relating to carrying out the recommendations of the military training commission when adopted by the regents as provided for in this article.

SECTION 697. *State aid for teachers employed.*—The commissioner of education, in the annual apportionment of State school moneys, shall apportion therefrom to each city and school district on account of courses of instruction as provided in this article, established and maintained in the schools of such city or district during the school year or any part thereof, a sum equal to one-half of the salary paid to each teacher qualified and duly licensed under the regulations of the regents to give instruction in such courses, but the entire amount apportioned on account of a single teacher during a school year shall not exceed $600. Such apportionments shall be made out of moneys to be appropriated therefor, subject to the provisions of law relative to apportionments of public money to the public schools of the State. Such apportionments shall not be made unless such courses of instruction shall be approved by the commissioners of education and the instruction therein shall meet the standards prescribed and conform to the provisions of this article and the rules of the regents of the university in respect thereto. If two or more districts shall jointly employ a teacher thus qualified to give such courses of instruction, the commissioner of education shall apportion a like amount on account of the salary paid to the teacher, which shall be apportioned to the school districts in accordance with the amount required to be paid by each district for the maintenance of such courses of instruction.

LAW OF 1918, CH. 442, Section 2, provides as follows:

The education department may provide for the supervision and special instruction in physical training of teachers regularly employed to give instruction in other subjects, who are assigned or designated as required by this act by boards of education or trustees to give instruction in physical training to the children attending the schools under the management of such boards of education or trustees in which such teachers are employed. The sum of $60,000, or so much thereof as may be necessary, is hereby appropriated for the purpose of making effective the provisions of this section.

MILITARY TRAINING LAW, STATE OF NEW YORK.

Law of 1916, as amended in 1917 and 1918.

SECTION 26. *Military training commission, its assistants, employees and expenses.*—A military training commission for the State is hereby established composed of the major general commanding the National Guard ex officio, who shall be chairman of the commission, a member to be appointed by the board of regents of the University of the State and a member to be appointed by the governor. The appointed members shall hold office for terms of four years.

The commission shall meet at such places within the State at such stated times as it determines and other meetings shall be held at the call of the chairman or of a majority of the members of the commission at a time and place stated in the call.

The commissioners shall not receive any compensation for their services as such, but they shall be paid their traveling expenses actually and necessarily incurred in the performance of their duties as commissioners.

The commission may appoint and at pleasure remove an inspector of physical training at a salary not exceeding $5,000 a year and other assistants and clerks and employees at salaries to be fixed by the commission.

The commission shall make an annual report to the governor containing a summary of the business transacted with a statement in detail of its expenditures.

SECTION 27. *Physical and disciplinary training in schools; military training.*—(1) The military training commission shall advise and confer with the board of regents of the University of the State of New York as to the courses of instruction in physical training to be prescribed for elementary and secondary schools as provided in the education law.

In order to more thoroughly and comprehensively prepare the boys of the elementary and secondary schools for the duties and obligations of citizenship, it shall also be the duty of the military training commission to recommend from time to time to the board of regents the establishment in such schools, of habits, customs, and methods best adapted to develop correct physical posture and bearing, mental and physical alertness, self-control, disciplined initiative, sense of duty, and the spirit of cooperation under leadership.

(2) After the first day of September, 1916, all boys above the age of 16 years and not over the age of 19 years, except boys exempted by the commission, shall be given such military training as the commission may prescribe for periods aggregating not more than three hours in each week during the school or college year, in the case of boys who are pupils in public or private schools or colleges, and for periods not exceeding those above stated for 41 weeks in each year in the case of boys who are not such pupils. Such training periods, in the case of pupils in schools and colleges, shall be in addition to prescribed periods of other instruction therein and outside the time assigned therefor. Such training shall be conducted under the supervision of the military training commission by such male teachers and physical instructors of schools and colleges as may be assigned by the boards of education or trustees of such schools or governing bodies of such colleges and accepted by the commission, and by officers and enlisted men of the National Guard and Naval Militia selected by the commission and detailed for that purpose or such officers and enlisted men of the United States Army as may be available. The officers and enlisted men of the National Guard and Naval Militia so detailed shall, while in the actual performance of the duties of the detail, receive such percentage of the pay authorized by this chapter for officers and enlisted men of the National Guard and Naval Militia of their respective grades and length of service as may from time to time be fixed by the commission. Teachers and instructors assigned from schools and colleges shall be paid such compensation as the commission may determine out of moneys appropriated for carrying out the provisions of this article.

Such requirement as to military training, herein prescribed, may in the discretion of the commission be met in part by such vocational training or vocational experience as will, in the opinion of the commission, specifically prepare boys of the ages named for service useful to the State, in the maintenance of defense, in the promotion of public safety, in the conservation and development of the State's resources, or in the construction and maintenance of public improvements.

(3) The military training commission shall cause to be issued to each boy above the age of 16 years and not over the age of 19 years, who complies with the requirements of this article, a certificate in such form and in such manner as the commission shall prescribe, stating that such boy is enrolled for military training and is meeting the requirements of the law as to such military training.

(4) No boy above the age of 16 years and not over the age of 19 years shall be permitted to continue in attendance upon instruction in any public or private school or college within the State unless such boy is in possession of a certificate issued as hereinbefore provided, or unless such boy has been exempted by the commission from military training as provided by law and the rules and regulations of the commission. It shall be the duty of the principal or other officer or person having and exercising supervision and control over any such school or college to exclude such boys from attendance upon instruction thereat unless they possess such certificate or are exempted by the commission as herein provided. If the principal or officer in charge of a private school shall fail to comply with the provisions of this subdivision, such school shall not receive any apportionment from public-school moneys or academic funds appropriated by the State legislature for the aid of such schools; and if the officer or person in charge of a college shall fail to comply with the provisions of this subdivision, such college shall not be recognized as one of the colleges which may be attended by the holder of a State scholarship issued under the provisions of chapter 292 of the laws of 1913 and the acts amendatory thereof.

(5) A boy above the age of 16 years and not over the age of 19 years who does not possess a certificate issued as herein provided, showing that he is enrolled for military training and is meeting the requirements of the military training commission as to such military training, shall not be employed or continued in employment by any person, firm, or corporation within this State, or by any officer, manager, superintendent, or other employee acting in behalf thereof, unless such boy has been exempted by the commission under its rules and regulations. (As amended by L. 1917, ch. 49, and L. 1918, ch. 470.)

SECTION 28. *Field training for boys.*—Within the limit of appropriations therefor, the commission shall establish and maintain State military camps of instruction for field training of boys who are physically fit and above the age of 16 years and not over the age of 19 years and who are accepted therefor by the commission. In determining the persons to receive such field training, where moneys available are not sufficient to provide for all, preference shall be given in the following order unless otherwise provided by law: (1) To male pupils in attendance during the preceding school year in secondary schools; (2) pupils in attendance at State agricultural schools and State agricultural colleges during that period; (3) the other boys above specified. The camps shall be located in such places throughout the State as the commission may determine. Any society, organization, or association having a fair ground and entitled to an apportionment of State moneys under sections 310 and 311 of the agricultural law, shall, upon the request of the commission, allow the use of its grounds, or part thereof, for any such camp, when the grounds are not needed for its own purposes, unless previously leased to other parties; and if any such society, association, or organization shall refuse to allow the use of its grounds as above provided, the moneys otherwise due to it under such law hall be withheld each year in which such refusal occurs. Such field training hall be given annually, during the summer months, and shall for each deachment of boys cover a period of not less than two or more than four weeks, s the commission may determine. Such camps and the training and discipline hereat shall be under the direction and charge of the commission. The major eneral commanding the National Guard shall detail for service at such camps uch number of officers and enlisted men of the National Guard and Naval ilitia as may be required by the commission. Such officers and enlisted men uring such detail shall receive pay, subsistence, and transportation as authorzed in this chapter and the regulations issued thereunder for officers and enisted men of their grades and length of service on duty under orders of the ajor general commanding the National Guard. (As amended by L. 1918, h. 470.)

SECTION 29. *General powers and duties of the commission.*—The commission, addition to the powers elsewhere in this article conferred on it, shall have ower to—

1. Provide for the observation and inspection of the work and methods precribed under the provisions of this article, or under the provisions of the ducation law relating to instruction in physical training prescribed after conerence with the commission.
2. Prescribe the powers and duties of the inspector of physical training.
3. Regulate the duties of clerical and other assistants and employees of the ommission.
4. Prescribe rules and regulations for compulsory attendance during the eriods of military training provided in this article.
5. Regulate individual exemptions from prescribed military training.
6. Maintain, and cooperate with the colleges in the State or the Federal auorities in maintaining, courses of instruction for male teachers and physical structors and others who volunteer and are accepted by the commission.
7. Make regulations and rules for fully carrying into effect the provisions f this article.

SECTION 29–a. *State military property, including armories, may be used.*—he authorities in charge of armories shall, upon the application of the miliry training commission, allow the use of any armory of the National Guard nd Naval Militia for the conduct of military drills provided for by this rticle, when such armory is not then required for the use of the National uard or Naval Militia, and shall authorize the temporary use by boys for hom military instruction is provided as prescribed in this article, for the purose of such drills, of arms, and other equipment of the National Guard and aval Militia, belonging to the State, not then required for the use of the ational Guard or Naval Militia, and of arms and other equipment which may ave been rendered obsolete and unserviceable and which may be retained and ssued for such purpose, under such rules and regulations as the proper ilitary authorities may prescribe. The military authorities of the State are uthorized and empowered to loan to the military training commission such ilitary property as may be necessary in the organization and maintenance of eld training camps, and to carry out the provisions of this article.

SECTION 29–b. *Use of school buildings.*—The school authorities throughout the tate are authorized to permit the use of school buildings and school grounds or the purpose of carrying out the provisions of this article.

SECTION 29–c. *Expenses of detailed officers and men.*—The expenditures auhorized to be made by this article to officers and enlisted men of the National uard detailed as therein authorized shall be paid from funds appropriated to arry out the provisions of this article.

SECTION 29–d. *Definitions; article not applicable to certain schools.*—The expression "school authorities" as used in this article shall be construed to have the same meaning and effect as is given to such expression in the education law. "Secondary schools" mean schools for "secondary education," as defined in such law, to the extent that they provide such education. None of the provisions of this article shall apply to any agricultural college in any institution in this State which receives the benefits of the act of Congress of July 2, 1862, providing for instruction in agriculture, the mechanic arts, and military training, and in which instruction in military tactics is now required of pupils, nor shall it apply to pupils therein.

THE STATE OF RHODE ISLAND.

SECTION 1. All children above the age of 8 years, attending public schools or such other schools as are managed and controlled by the State shall receive therein instruction and practice in physical training under such regulations as the State board of education may prescribe or approve during periods which shall average at least 20 minutes in each school day. No private school or private instruction shall be approved by any school committee for the purposes of chapter 72 of the General Laws as substantially equivalent to that required by law of a child attending a public school in the same city and town unless instruction and practice in physical training similar to that required in public schools shall be given.

SECTION 2. For the purpose of preparing and introducing such course of instruction, the sum of $500, or so much thereof as may be necessary, is hereby appropriated out of any money in the treasury not otherwise appropriated for expenditure by the State board of education during the fiscal year ending on December 31, 1917; and the State auditor is hereby directed to draw his orders on the general treasurer for the payment of said sum or so much thereof as may be required, on vouchers approved by said State board of education.

SECTION 3. This act shall take effect on and after July 1, 1917.

THE STATE OF NEW JERSEY.

Law introduced February 13, 1917.

1. There shall be established and made a part of the courses of instruction in the public schools of this State what shall be known as "A Course in Physical Training." Such course shall be adapted to the ages and capabilities of the pupils in the several grades and departments, and shall include exercises, calisthenics, formation drills, instruction in personal and community health and safety and in correcting and preventing bodily deficiency, and such other features and details as may aid in carrying out these purposes, together with instruction as to the privileges and responsibilities of citizenship, as they relate to community and national welfare, with special reference to developing bodily strength and vigor, and producing the highest type of patriotic citizenship; and in addition, for female pupils, instruction in domestic hygiene, first aid and nursing. To further promote the aims of this course any additional requirements or regulations as to medical inspection of school children may be imposed.

2. The course herein prescribed shall be prepared by the State commissioner of education, and, when approved by the State board of education, shall constitute the prescribed course in physical training. By and with the approval of the State board of education, the State commissioner of education may employ experts to assist him in preparing such courses of instruction, and to assist in putting into operation the courses and work as prescribed in the public schools of the State.

3. Every pupil, excepting kindergarten pupils, attending the public schools of this State, in so far as he or she is physically fit and capable of doing so, which fitness shall be determined by the medical inspector, shall take the course in physical training as herein provided, and such course shall be a part of the curriculum prescribed for the several grades, and the conduct and attainment of the pupils shall be marked as in other courses or subjects, and the standing of the pupil in connection therewith shall form a part of the requirements for promotion or graduation.

4. The time devoted to such courses shall aggregate at least two and one-half hours in each school week, or proportionately when holidays fall within the week.

5. If the State board of education or any school district or municipality, as hereinafter provided, shall determine that the course in physical training as prescribed for male pupils in the high school shall include military training, such a course shall be prepared by the commissioner of education and the adjutant general and be a part of the course of physical training for male pupils. All male pupils in the high school shall be required to take this course, excepting in the case of boys physically unfit, as determined by the medical inspector, or whose parents may have conscientious scruples against military training; provided, however, in event the State board of education shall not include military training in the requirements for such course, the board of education of any school district, which elects the members of such board by vote of the people, may submit the question of whether the same shall be included in the course of physical training as herein prescribed for such district, or upon petition to the board of education by at least 10 per centum of the legal voters of such district such board shall submit the question to referendum vote of those qualified to vote in such district for members of the board of education; at the ensuing annual or a special election in such school district and in districts which do not elect members of the board of education by vote of the people, when the said board, by resolution passed by it and delivered to the clerk of the municipality within which such district is constituted, shall so determine, or upon petition of at least 10 per centum of the legal voters of such municipality delivered to the clerk of the municipality, said clerk shall cause the question as to whether the course of physical training shall include military training to be submitted to a referendum vote of the legal voters of such municipality and such question shall be placed on the ballot of the next ensuing general election in said municipality.

Before a vote shall be taken, as herein provided, the clerk of the school district or municipality, as the case may be, shall cause 15 days' notice to be published at least twice, in a newspaper or newspapers published or circulating in said school district or municipality. The first insertion of such notice shall be at least 15 days prior to the date of such election. The ballot shall be in the following form:

	Yes.	**Shall the course in physical training for male pupils in the high school include military training?**
	No.	

To vote in favor of the question, place an X mark in the square to the left of the word "Yes;" to vote against it, place an X mark in the square to the left of the word "No."

The ballots shall be canvassed in the same manner as those for members of the board of education in a school district and for candidates for office in a municipality. If a majority of the votes cast on such question shall be in the affirmative, military training shall be included in the course of physical training for male pupils in the high school of such district or municipality, as the case may be.

The cost of all matters pertaining to such referendum vote shall be borne by the school district or municipality, as the case may be.

6. Where the course of physical training is amended to include military training, as provided in section 5, such necessary equipment, and expenses incidental thereto, shall be provided in the same manner as other expenses for the maintenance of the schools are provided.

7. Where a course of military training is included in the course of physical training, as herein provided, the instructor shall at all times hold a certificate as to qualification as an instructor in military training from the adjutant general, and the salary of the instructor shall be met by the district obtaining these services.

8. The State board of education shall adopt regulations fixing the necessary qualifications of teachers in physical training, and shall require all students at the State normal schools to receive thorough instruction in such courses, and shall provide such instruction for such students in attendance at the State summer schools as shall elect to take such instruction.

9. The instruction and courses in physical training shall be subject to the general supervision and direction of the commissioner of education. The commissioner of education shall appoint such expert assistants as in the opinion of the State board of education shall from time to time be necessary to carry out the purposes of this act.

10. The courses herein required shall be made a part of the instruction beginning with the next fall term of the school year; provided, that where the course of military training is adopted by a referendum vote, such course shall be instituted within 60 days of the date of such election. The board of education of any school district is hereby authorized to borrow on temporary loan such money as may be necessary for carrying out the provisions of this act in its respective district. Money so borrowed shall be placed in the appropriation, which shall be operative beginning July 1, 1918, and shall be paid by the 31st day of December, 1918. In the budget for the school year, beginning July 1, 1918, and each year thereafter, appropriation shall be made for carrying out the provisions of this act.

11. For the purpose of enabling the State commissioner of education and the State board of education to carry out the provisions of this act, the sum of $10,000 shall be appropriated in the supplemental appropriation bill and $12,000 in the annual appropriation bill.

12. This act shall take effect immediately.

THE STATE OF NEVADA.

SECTION 1. It is hereby made the duty of all school officers in control of public high schools in the State of Nevada to provide for courses of instruction designed to prepare the pupils for the duties of citizenship, both in time of peace and in time of war. Such instruction shall include (1) physical training designed to secure the health, vigor, and physical soundness of the pupil; (2) instruction relative to the duties of citizens in the service of their country. It shall be the aim of such instruction to inculcate a love of country and a *disposition* to serve the country effectively and loyally.

Special Teacher, When.

SECTION 2. All boards of education or boards of school trustees of county or district high schools offering a four-year high-school course are hereby empowered to employ teachers of physical training who shall devote all or part of their time to physical instruction for both boys and girls.

State Tax Authorized.

SECTION 3. In order to assist in the payment of salaries of said physical training instructors, there shall be levied on the passage of this act an ad valorem tax of 5 mills on the $100 of assessed valuation of all the taxable property of the State.

Superintendent of Public Instruction to Apportion Money.

SECTION 4. The State superintendent of public instruction at the time of the apportionment of other State school funds shall apportion the funds derived from the levy as provided in section 3 of this act on the basis of the high-school enrollment of the preceding school year, as follows: Three hundred dollars for each 100 pupils, or fraction thereof, enrolled in any high school partaking of the benefits of this act; but no high school shall receive such apportionment unless a legally licensed teacher of physical training is employed therein.

In Effect.

SECTION 5. This act shall take effect and be in force from and after its passage and approval.

Approved March 21, 1917.

THE STATE OF CALIFORNIA.

SECTION 1. The board of education of each county, city and county, and city, whose duty it is to prescribe the course of study for elementary schools of such county, city and county, or city, shall prescribe suitable courses of physical education in accordance with the provisions of this act for all pupils enrolled in the day elementary schools, except pupils who may be excused from such training on account of physical disability/and the high-school board of each high-school district shall prescribe suitable courses of physical education in accordance with the provisions of this act for all pupils enrolled in the day high schools of such district, except pupils regularly enrolled in high-school cadet companies and pupils who may be excused from such courses on account of physical disability.

SECTION 2. The aims and purposes of the courses of physical education established under the provisions of this act shall be as follows: (1) To develop organic vigor, provide neuromuscular training, promote bodily and mental poise, correct postural defects, secure the more advanced forms of coordination, strength, and endurance, and to promote such desirable moral and social qualities as appreciation of the value of cooperation, self-subordination, and obedience to authority, and higher ideals, courage, and wholesome interest in truly recreational activities; (2) to promote a hygienic school and home life, secure scientific supervision of the sanitation of school buildings, playgrounds, and athletic fields, and the equipment thereof.

SECTION 3. It shall be the duty of the superintendent of schools of every county, city and county, or city, and of every board of education, board of school trustees, or high-school board, to enforce the courses of physical education prescribed by the proper authority, and to require that such physical education be given in the schools under their jurisdiction or control. All pupils enrolled in the elementary schools, except pupils excused therefrom in accordance with the provisions of this act, shall be required to attend upon such courses of physical education during periods which shall average 20 minutes in each school day, and all pupils enrolled in the secondary schools, except pupils excused therefrom in accordance with the provisions of this act, shall be required to attend upon such courses of physical education for at least two hours each week that school is in session.

SECTION 4. When the number of pupils in any city, or city and county, or school district is sufficient, such city, or city and county, or school district shall employ a competent supervisor, and such special teachers of physical education as may be necessary. The trustees of two or more contiguous elementary school districts, or the trustees of one or more elementary school districts and the high-school board of the high-school district in which such elementary school district or districts are situated, may by written agreement join in the employment of a competent teacher of physical education for such districts, and the salary of such teacher and the expenses incurred on account of such instruction shall be apportioned as the school board concerned may agree.

SECTION 5. The State board of education, in standardizing the courses of instruction offered in the several normal schools of the State, shall prescribe a course in physical education, and shall make the completion of such course a requirement for graduation.

SECTION 6. It shall be the duty of the State board of education: (1) To adopt such rules and regulations as it may deem necessary and proper to secure the establishment of courses in physical education in the elementary and secondary schools in accordance with the provisions of this act; (2) to appoint a State supervisor of physical education whose duties are hereinafter defined; (3) to compile, or cause to be compiled and printed, a manual in physical education for distribution to teachers in the public schools of the State.

SECTION 7. The supervisor of physical education appointed under the provisions of this act shall be experienced in the supervision of physical education in public schools. He shall not be subject to the provisions of any civil-service law of the State. He shall exercise general supervision over the courses of physical education in elementary and secondary schools of the State; shall exercise general control over all athletic activities of the public schools; shall advise school officials, school boards, and teachers in matters of physical education; shall visit and investigate the work in physical education in the public schools, and shall perform such other duties as may be assigned to him by the State board of education. He shall receive a salary not exceeding $3,600 per annum, as fixed by the State board of education, payable at the same time and in the same manner as the salaries of other State officers are payable. He shall also receive his actual and necessary traveling expenses while on official business. The State board of education may, within the limits of the appropriation hereinafter provided, employ such expert and clerical assistance as may be necessary to carry out the provisions of this act.

SECTION 8. The sum of $10,000 is hereby appropriated out of any moneys belonging to the State not otherwise appropriated to defray the expenses of the State board of education in carrying out the provisions of this act during the sixty-ninth and seventieth fiscal years.

Approved May 26, 1917.

THE STATE OF DELAWARE.

SECTION 1. That from and after the passage of this act, the school children of this State shall receive physical training, the character and method of which shall be as prescribed from time to time by the State board of education, and a commission is hereby created to be known as "The Physical Training Commission," whose duty shall be to devise a system of physical training and inaugurate the same in the schools of this State, subject to the direction of the State board of education.

SECTION 2. The said commission shall consist of the governor and four suitable persons, to be appointed by the governor, who shall serve without pay.

The functions of the said commission shall cease when a system of physical training shall have been inaugurated, as provided in section 1 of this act.

Approved April 10, 1918.

THE STATE OF MARYLAND.

Introduced March 22, 1918.

SECTION 1. Be it enacted by the General Assembly of Maryland, that there shall be established and provided in all the public schools of this State and in all schools maintained or aided by this State physical education and training for pupils of both sexes during the following minimum periods: A. In the elementary public schools at least 15 minutes in each school day and also at least one hour of directed play outside of regular classroom work in each school week. B. In public high schools at least one hour in each school week and also at least two hours of directed play or athletics for all pupils outside of regular classroom work in each school week.

SECTION 2. And be it enacted, that the State board of education upon recommendation of the State superintendent of schools shall appoint a supervisor of physical education, whose duty it shall be to direct and carry out the provisions of this act under the direction of the State superintendent of schools. The salary of such supervisor shall be fixed and paid by the State board of education out of any funds in its possession available for this purpose.

The State board of education upon recommendation of the State superintendent of schools is hereby authorized and directed to appoint such other assistants, both clerical and professional, as shall be necessary in the administration and supervision of physical education; and shall make such by-laws and other regulations as shall be necessary to carry into effect the provisions of this act.

SECTION 3. And be it further enacted, that immediately after his appointment the supervisor of physical education, under the direction of the State superintendent of schools, shall organize his work and shall formulate the necessary and proper plans, courses, and regulations for carrying out the provisions of this act which when approved by the State board of education shall be followed in providing physical education and training as required under section 1 of this act.

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Statistics of Agricultural and Mechanical Colleges

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BY

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STATISTICS OF AGRICULTURAL AND MECHANICAL COLLEGES.

The report of the agricultural and mechanical colleges for the year 1916–17 has more than ordinary significance on account of the important relation of these institutions to the war. From the beginning they have cooperated closely with the Government in furnishing a large quota of men with military training. Courses have been added which will further promote efficiency in the home and agricultural life of the community at large. Many colleges have added or adapted mechanical and engineering courses which will be of special service in war activities. The statistics which follow do not show the exact loss of students and instructors which resulted from the declaration of war, but it has been estimated that the loss amounts to about 20 per cent of the total enrollment.

While special concessions were extended to students who were about completing courses, so that they received credit for the last few weeks of their work although absent in the service of the Nation, yet it has generally been considered inadvisable to continue this policy unless the student were actually present. As a result, students have not been carried on the registration rolls unless in residence, as has been done generally in Germany.

RESERVE OFFICERS' TRAINING CORPS.

The year 1916–17 marks the beginning of the regular system of Reserve Officers' Training Corps in the institutions. Previous to the authorization of these courses it was impossible for the War Department to properly recognize the military work of the colleges by granting to proper graduates commissions in the Army. It is now arranged that, if the institution offers certain special military work, the student may upon graduation be immediately commissioned a provisional second lieutenant in the regular Army (this is on a peace basis); in addition, the students who are taking the reserve officers course are allowed other privileges, such as allowance for uniforms. Altogether, it marks a distinct step forward in recognition of the military work which has always been given by the agricultural and mechanical colleges.

Under the provisions of the act of Congress of June 3, 1916, the War Department is placed in immediate control of the military instruction given in all institutions that have units of the Reserve Officers' Training Corps. The General Orders, No. 49, 1916, of the War Department give in detail the provisions for the establishment, administration, and maintenance of the Reserve Officers' Training Corps at educational institutions in time of peace. A partial synopsis of the principal provisions follows:

All units will be organized in two divisions, a senior division requiring four years of collegiate study, a junior division composed of all other units.

Only institutions at which an officer of the Army is detailed as instructor in military science and tactics and at which at least 100 male students are under military instruction will be eligible for units.

The course of study in military science may be prescribed by the War Department and shall be of not less than three hours per week for the senior division.

Arms, uniforms, equipment, and supplies may be issued to units.

Any graduate of the senior division course may be, in time of peace, commissioned temporary additional second lieutenant in the Regular Army for six months, with pay at the rate of $100 per month and allowances. After the expiration of this service he reverts to the status of a reserve officer.

Only about half of the institutions had perfected the organization of units during the year 1916–17, but practically all will have obtained units before the close of 1917–18.

FEDERAL ACTS FOR THE BENEFIT OF THE COLLEGES OF AGRICULTURE AND THE MECHANIC ARTS.

The principal acts providing for the support of instruction in these institutions are three in number:

(1) The act of July 2, 1862, granting public lands to the States, known as the "first Morrill Act," and the act of March 3, 1883, amending the previous act and providing for the investment of capital.

(2) The act of August 30, 1890, making yearly appropriations to the States and Territories in aid of colleges of agriculture and the mechanic arts, known as the "second Morrill Act."

(3) The act of March 4, 1907, known as the "Nelson amendment," increasing the annual appropriation to $50,000 per year to each State and extending the conditions for the use of the funds.

In addition to the three acts supporting instructional work, there have been three acts granting Federal aid for experimentation and extension work:

(1) The act of March 2, 1887, the "Hatch Act," granting $15,000 to each State for agricultural experiment stations.

(2) The act of March 16, 1906, the "Adams Act," increasing the annual payment for experiment stations to $30,000 for each State.

(3) The act of May 8, 1914, the "Smith-Lever Act," making an nnual appropriation to each State for agricultural extension work.

There are also a number of subsidiary acts and amendments, such s the acts authorizing the detail of Army officers to the colleges as nstructors in military science and tactics, the act authorizing free ostage on reports, etc.

The benefits of the act of 1862, or of later acts in lieu of it, are eceived by every State, and 53 institutions are thereby aided—one n each of 43 States and two each in Massachusetts, Mississippi, South arolina, Virginia, and Kentucky. Massachusetts divides its fund etween the Agricultural College and the Institute of Technology; hile Mississippi, South Carolina, Virginia, and Kentucky divide the unds between institutions for white and colored students.

The amount of the appropriation under the acts of 1890 and 1907 now fixed at $50,000 for each of the 48 States and the two insular ossessions—Porto Rico and Hawaii. Sixty-eight institutions are ided. Seventeen States maintain special colleges for colored stuents, which receive part of this fund.

Professors, instructors, extension workers, and experiment station staff, 1916–17.

	1912-13	1913-14	1914-15	1915-16	1916-17
institutions for white students	8,276	9,019	9,742	9,961	9,800
institutions exclusively for colored students	439	511	529	535	544
Total	8,715	9,530	10,271	10,496	10,344

Student enrollment, 1916–17.

	1912-13	1913-14	1914-15	1915-16	1916-17
institutions for white students	90,705	105,803	114,905	119,886	122,053
institutions exclusively for colored students	8,561	9,251	10,170	10,613	11,352
Total	99,266	115,054	125,075	130,499	133,405

tudents in regular college courses in certain subjects in institutions for white students.

Subjects.	1912-13	1913-14	1914-15	1915-16	1916-17
griculture	10,871	13,249	13,833	15,025	14,348
orticulture	459	512	1,053	634	941
orestry	534	485	989	374	347
eterinary science	598	598	1,294	841	773
ousehold economics	3,074	4,018	4,431	5,177	5,055
echanical engineering	3,830	4,090	4,189	4,340	4,417
ivil engineering	3,392	3,473	3,289	3,015	2,822
ailway engineering	74	55	336	517	46
lectrical engineering	3,027	3,277	3,335	3,921	3,256
ining engineering	796	677	713	671	871
hemical engineering	598	778	871	1,095	1,505
anitary engineering	117	132	495	355	79
extile engineering	69	90	99	150	107
eneral engineering	2,525	2,612	2,383	2,143	2,165
rchitecture	713	1,045	844	890	964
hemistry	729	614	715	713	831
harmacy	195	143	249	168	377
eneral science	4,860	4,356	4,842	5,673	8,959

Students in military science and tactics, 1916–17.

Institutions.	1912–13	1913–14	1914–15	1915–16	1916–17
In institutions for white students	22,804	26,600	28,746	31,268	33,704
In institutions exclusively for colored	2,426	2,436	2,029	2,177	1,415
Total	25,230	28,036	30,775	33,445	35,119
In Reserve Officers' Training Corps courses	....	....	....	....	8,035
Grand total	....	....	....	....	43,154

Enrollment in the principal divisions in institutions for white students, 1916–17.

Departments.	1912–13	1913–14	1914–15	1915–16	1916–17
Agriculture	12,462	14,844	17,169	16,874	16,409
Home economics	3,074	4,018	4,431	5,177	5,055
Mechanic arts	15,141	16,235	16,554	17,097	16,201
Short and special courses	11,300	15,510	11,997	12,181	16,477
All departments	90,705	105,803	114,905	119,886	122,063

Enrollment in institutions exclusively for colored students.

Departments.	1912–13	1913–14	1914–15	1915–16	1916–17
Preparatory	3,603	3,973	4,884	5,802	5,993
Industrial	....	....	420	573	1,048
Collegiate	1,138	2,135	2,020	[1] 981	903
All others	3,939	3,361	3,537	3,290	3,408
Total, excluding duplicates	8,561	9,251	10,170	10,613	11,352
Agriculture	1,795	2,200	2,368	2,053	2,054
Household arts	5,365	5,487	5,652	5,758	4,118
Industrial arts	2,725	2,848	3,024	2,683	2,825

[1] Reduction is due to a more rigid classification.

Bachelor or first degrees, 1916–17.[1]

Courses.	1912–13	1913–14	1914–15	1915–16	1916–17
In agricultural courses	1,384	1,903	2,311	2,584	2,803
In mechanical courses	1,775	1,959	2,145	2,279	2,404
In home economics	318	436	653	754	787
All other courses	3,935	4,205	4,362	4,573	5,367
Total	7,412	8,503	9,471	10,190	11,361

ADVANCED DEGREES, 1916–17.

In agricultural courses	165	147	150	229	221
In mechanical courses	207	153	202	238	186
In home economics	39	17	5	7	9
All other courses	672	880	755	825	897
Total	1,083	1,197	1,112	1,299	1,313

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[1] Not including institutions exclusively for colored students.

PROPERTY, 1916–17.

There has been an increase of $13,888,780 in the value of all property held for the benefit of the land-grant colleges, while the *total* expenditure for building operations during the year was *reported* at $10,031,932.

Value of property.

	1912–13	1913–14	1914–15	1915–16	1916–17
Endowment funds	$46,663,022	$59,966,160	$61,283,123	$63,704,947	$66,367,086
Farm and grounds	22,157,858	23,981,085	19,062,872	16,649,798	30,937,913
Buildings	47,003,199	51,825,766	65,524,849	72,575,218	65,619,208
Apparatus and machinery	14,400,127	16,842,273	18,524,284	18,603,947	22,198,115
Library	5,664,596	5,996,787	6,111,788	6,441,133	6,685,958
Live stock	1,046,760	1,686,282	1,293,681	1,444,395	1,599,928
Total	136,935,562	160,298,353	171,800,597	179,519,438	193,408,218

GIFTS, BUILDINGS, AND IMPROVEMENTS, 1916–17.

University of Arizona.—New central heating plant, $50,000; president's garage $1,250; the mining and engineering building to cost $175,000 was begun.

University of Arkansas.—Brick addition to the library of the college of agriculture, $1,000.

University of California.—Expenditures on new buildings and additions to buildings—At Berkeley: Aeronautics building, of frame, $3,400; Jane K. Sather campanile, $5,903; first wing of the chemistry building, $144,860; domestic science building, frame, $2,119; Hilgard Hall, for agricultural departments, $226,828; power-plant addition, $78,000; addition to and completion of university library building, $401,847; storehouse, $10,122; Wheeler hall for classrooms, $430,597; total, $1,303,676. At San Francisco: University hospital building, $286,489; addition to dentistry building, $29,941. At Riverside: Laboratory building for the citrus experiment station, $95,143; director's residence, $24,052. Grand total, $1,739,500.

Colorado Agricultural College.—The General Assembly of Colorado provided a joint mill-tax levy for the erection of buildings during a period of 10 years. A building fund is provided that permits definite campus and building planning with assurances that these can be carried out.

Connecticut Agricultural College.—Central heating plant partly completed.

University of Illinois.—Mechanical engineering laboratory reconstructed, $40,000; the woman's residence hall completed, the first dormitory erected by the university, $175,000; this building will be occupied until the end of the war by the aviators in training for the United States aviation school.

Purdue University, Indiana.—Biology building completed, $100,000.

Iowa State College of Agriculture and Mechanic Arts.—Buildings in course of construction will be ready for occupancy in 1917–18. Hospital, $45,000; dairy barn, $20,000; dormitory for women, $60,000; animal husbandry laboratory, $50,000.

Kansas State Agricultural College.—Stone barn for the department of horticulture, $2,350.

Michigan Agricultural College.—A new general engineering building, $168,000, with equipment for same, $50,000, was completed to replace structure destroyed by fire, March 5, 1916.

University of Missouri.—Improvements to central heating plant, $22,500; other improvements, $2,325.75.

Montana State College of Agriculture and Mechanic Arts.—On October 20, 1916, the chemistry building burned; an appropriation of $50,000 has been made to replace one unit of it, and another appropriation of $50,000 has been made for a new engineering building.

University of Nevada.—New agricultural building, $80,000; purchase of a farm, $43,000.

Cornell University, New York State College of Agriculture.—New sheep barn erected; a new palm and decorative plant greenhouse erected; addition to stock-judging pavilion and forestry building.

Oklahoma Agricultural and Mechanical College.—One seed house on station farm, $2,200.

Oregon Agricultural College.—The State appropriated $65,000 toward the construction of a new library building to cost approximately $115,000; it is under construction, to be completed in 1918. A new hog barn was completed at a cost of $5,520, and an additional $4,000 was expended on the forestry building.

Rhode Island State College.—The legislature appropriated $80,000 for a building for agriculture and home economics; construction will be postponed until after the war.

University of Tennessee.—The legislature has provided a one million dollar bond issue for new buildings, and a one-half mill tax for support; it also provided for the establishment of a new agricultural experiment station in middle Tennessee, in Maury County, near Columbia. Building operations will be postponed because of war conditions in the building trades.

Agricultural and Mechanical College of Texas.—Assembly hall, $100,000; experiment station building, $75,000; steam plant, $75,000; veterinary medicine building, $100,000; and new dormitory, $90,000.

Virginia Agricultural and Mechanical College and Polytechnic Institute.—Three new residences costing $13,600; and additions to shops, $7,000.

West Virginia University.—In process of construction an agricultural building, and a women's dormitory, to cost $315,000.

University of Wisconsin.—New construction during 1916–17: New entry to gymnasium, $3,678; boat and bath house, $3,511; Camp Randall improvements, $8,501; women's field house, $4,426; sprinkler system in chemistry building, $4,882; soils building, $25,861; physics building, $123,886; repairs on agricultural chemistry building, $1,002; hog serum laboratory, $2,949; stock and forage barn, $3,178; heating station, $3,322; serum plant, $1,416; Ashland station, $2,760; Spooner station, $1,487; music hall, $13,745; pumping station, $11,801; improvement of grounds, $2,793; electrical substation, $2,949; university farm improvements, $2,272; all other new construction, $3,822; total, $228,241.

INSTITUTIONS FOR COLORED STUDENTS.

State Agricultural and Mechanical College for Negroes, Alabama.—The Mayhew Building, containing the carpentry and machine shops, was destroyed by fire January 17, 1917, and is a total loss. No provision has been made for replacing it.

Southern University and Agricultural and Mechanical College, Louisiana.—A hospital, constructed by the students in the mechanical department, has been completed with a cash outlay of about $3,000; also a bridge over the lake for $500. Plans are ready for a dairy, to be built in the same manner with funds available in 1918.

Colored Normal, Industrial, Agricultural, and Mechanical College,[1] *South Carolina.*—In October, 1916, fire destroyed the chapel and boys' dormitory. The dormitory is being rebuilt with money from fire insurance and some furnished by the State.

Prairie View State Normal and Industrial College, Texas.—The following new buildings are in course of construction: Household arts building, $50,000; a brick laundry, $15,000; and a dormitory, $50,000.

INCOME, 1916–17.

In reporting the income of the colleges, the growing importance of both the experimental work and the extension work has made it advisable to separate the items into three distinct groups—funds for instruction and administration, funds for the experiment stations, and funds for the extension service. In Table 9 is given the first of these groups, funds for instruction and administration, and in Table 10 are given the other two groups, together with the grand total income.

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[1] Name since changed to State Agricultural and Mechanical College.

The following tables give the income under the old classifications for the years 1913–1916, inclusive, and the income under the new classification for the year 1916–17.

Income for five years.

Source of income.	Funds for instruction and administration.				
	1913	1914	1915	1916	1917
State funds:					
From endowment granted by the State.	$131,415	$479,050	$104,966	$135,444	$160,766
From mill tax levy for support	3,095,341	4,010,234	3,733,316	3,842,112	6,441,533
From mill tax levy for permanent improvements	591,924	615,183	624,467	629,419	692,116
From appropriations for support	6,703,831	9,176,464	10,774,782	11,829,281	10,300,845
From appropriations for permanent improvements	3,695,249	3,716,834	2,768,576	2,833,204	3,783,702
Total State aid	14,217,760	17,997,765	18,006,107	19,269,460	21,378,962
United States funds:					
From land-grant fund of 1862	859,074	846,087	856,838	884,514	930,170
From other land-grant funds	186,551	264,111	195,239	193,573	241,840
From Morrill-Nelson funds of 1890 and 1907	2,490,000	2,500,000	2,500,000	2,500,000	2,515,171
Total Federal aid	3,535,625	3,592,198	3,552,077	3,578,087	3,687,181
College funds:					
From college endowment funds	966,204	1,151,511	1,216,672	1,144,075	1,399,607
From tuition, fees, board, and lodging [1]	2,683,960	3,059,358	3,565,771	3,741,429	6,077,868
From departmental earnings	([2])	([2])	([2])	([2])	2,970,412
From private gifts for support	([2])	([2])	([2])	([2])	312,054
From private gifts for permanent improvements and endowment	([2])	([2])	([2])	([2])	901,340
Miscellaneous	3,558,590	9,090,392	5,621,138	10,541,771	1,113,836
Total college funds	7,208,754	13,301,261	10,403,581	15,427,275	12,775,117
Total income for instruction and administration	24,962,139	34,891,224	31,961,765	38,274,822	37,841,260

FUNDS FOR EXPERIMENT STATIONS.

State funds	$1,024,455	$1,068,441	$1,129,709	$1,059,018	$1,588,888
United States funds	1,359,302	1,347,459	1,369,288	1,362,000	1,369,700
Private gifts	([3])	([3])	([3])	([3])	242,620
Experiment station earnings	([3])	([3])	([3])	([3])	1,213,216
Total funds for experiment stations	2,383,757	2,415,900	2,498,997	2,421,018	4,414,419

FUNDS FOR EXTENSION SERVICE.

State funds, Smith-Lever, and others	$722,425	$1,292,273	$1,075,005	$1,364,356	$2,325,563
United States funds			491,238	1,113,490	1,411,886
County, city, or association funds	([3])	([3])	([3])	([3])	696,334
Private gifts and miscellaneous	([3])	([3])	([3])	([3])	79,985
Total for extension service	722,425	1,292,273	1,566,243	2,477,846	4,513,718
Grand total income of institutions	28,068,321	38,599,397	36,027,005	43,173,686	46,769,397

[1] Receipts from board and lodging included for the first time in 1917.
[2] Included in miscellaneous.
[3] Not reported.

MORRILL-NELSON FUND.

Funds Appropriated Under Acts of Congress of August 30, 1890, and March 4, 1907.

The total appropriation for the year ending June 30, 1917, from the United States Treasury in aid of colleges of agriculture and the mechanic arts under the provisions of the acts of Congress of August

30, 1890, and March 4, 1907, was $2,500,000, each of the 48 States and the two insular possessions receiving $50,000. In Table 11 are given the details for the year 1916–17. In addition this table shows $7,132.60 received from bank interest on daily balances during the year in three States and added to the principal. The annual installment has been fixed at $50,000 to each State since the year 1911–12. The following tables give the amount expended under each schedule and the proportion each year:

Morrill-Nelson funds.

(Acts of Aug. 30, 1890, and Mar. 4, 1907.)

Subjects.	1912–13	1913–14	1914–15	1915–16	1916–17
Agriculture	$584,512	$592,920	$579,374	$611,606	$587,411.01
Mechanic arts	667,507	700,140	717,503	694,347	702,838.53
English language	235,873	222,844	219,011	211,989	207,928.46
Mathematics	229,322	219,057	207,045	197,022	199,002.88
Natural and physical science	616,494	600,413	565,881	581,797	581,734.37
Economic science	156,379	168,771	179,519	184,813	194,991.44
Training of teachers in special subjects	43,537	30,474	33,329	34,777	44,270.48
Total	2,532,624	2,534,619	2,501,662	2,516,351	2,518,237.17

Percentage of appropriation expended for instruction in various subjects.

Subjects.	1912–13	1913–14	1914–15	1915–16	1916–17
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Agriculture	23.3	23.7	23.1	24.4	23.3
Mechanic arts	26.3	27.7	28.7	27.5	27.9
English language	9.4	8.6	8.8	8.4	8.3
Mathematical science	9.1	8.5	8.3	7.8	7.9
Natural and physical science	24.6	23.6	22.6	23.1	23.1
Economic science	6.2	6.7	7.2	7.4	7.7
Training of teachers in special subjects	1.1	1.2	1.2	1.4	1.8

LAND-GRANT FUND OF 1862.

Income from Funds Created by the Land-Grant Act of 1862.

Under the act of Congress of July 2, 1862, 10,783,819 acres of public lands have been allotted to the different States; of these, 1,020,696 acres remain unsold. From the sale of these lands permanent funds have been created amounting to $15,254,899, yielding an income of $960,009 for the benefit of the colleges. In Table 12 are given the details of income and expenditure for the year 1916–17. The figures below are the totals for the past three years.

Land-grant fund of 1862.

	1914–15	1915–16	1916–17
Principal of fund	$14,493,441	$15,105,925	$15,254,899
Income for year	964,579	916,151	960,009
Expenditures for year	948,381	928,048	931,039

CHANGES IN COURSES AND METHODS OF INSTRUCTION.

Alabama Polytechnic Institute.—The course in veterinary medicine has been changed from three to four years.

Delaware College.—A department of education has been organized.

Purdue University, Indiana.—An engineering experiment station has been organized.

Kansas State Agricultural College.—The calendar has been changed to two semesters and a nine weeks' summer school.

Massachusetts Institute of Technology.—The new course of chemical engineering practice requires the student to study at the institute for three and one-half years, for one year at factories distributed over the country in laboratory methods, and then finally to return to the institute for a year of research and special work, receiving at the end of a five-year period the degree of master of science in chemical engineering. A course in electrical engineering is to be given by the institute and the General Electric Co.; students will transfer from the institute to the General Electric Co. after the second year; each class will be divided into two squads, one at the institute and the other at the General Electric Co.; the squads will interchange places every three months.

Montana State College of Agriculture and Mechanic Arts.—Beginning October 1, 1917, the calendar was changed from two semesters of 18 weeks each to four quarters of 12 weeks each.

North Dakota Agricultural College.—Professional courses for teachers have been established.

Clemson Agricultural College, South Carolina.—New courses in chemical engineering and in general science have been introduced, and the mechanical-electrical engineering course has been divided into two distinct courses—mechanical engineering and electrical engineering.

Agricultural and Mechanical College of Texas.—All preparatory work has been abolished; a school of veterinary medicine has been established.

Virginia Agricultural and Mechanical College.—A four-year course in applied physics, leading to a B. S. degree, has been established; in connection with the University of Virginia and William and Mary College, a four-year teachers' training course in agriculture, designed to fit teachers for vocational schools, has been added.

University of Wyoming.—The home economics courses have been rearranged and a two-year special vocational course added. A four-year course in music has been introduced, leading to the degree of bachelor of music. Solid geometry is no longer a required subject for admission to the college of agriculture.

INSTITUTIONS FOR COLORED STUDENTS.

Branch Normal College, Arkansas.—A year has been added to the normal course; in the last year two periods a day will be taken by boys in agriculture and mechanic arts, by girls in gardening and home economics. A community class in sewing, cooking, and canning was held.

State College for Colored Students, Delaware.—Latin has been dropped from the curriculum and more emphasis placed on the training of teachers for rural schools.

Southern University and Agricultural and Mechanical College, Louisiana.—Through the Louisiana State University 6 demonstration extension agents for negroes have been in the field; beginning September 1 this number was increased to 12; in addition 2 women canning agents were employed; the extension work culminated in a farmers conference at the college.

Princess Anne Academy, Maryland.—Extension work has been inaugurated.

Lincoln Institute, Missouri.—Two years have been added to the normal course, carrying it to include two years of college work beyond the four years of high school.

Prairie View State Normal and Industrial College.—The former general curriculum has been revised and separated into four distinct curricula—normal, household arts, agricultural, and mechanic arts. Several short courses have been added, a two-year course in agriculture and a two-year course in home economics, also 13 vocational or trade courses.

TABLE 1.—*Statistics of colleges of agriculture and the mechanic arts endowed by acts of Congress approved July 2, 1862, August 30, 1890, and March 4, 1907, for 1916-17.*

Institutions.	President.	Date of opening of institution.	Acres alloted to States under act of July 2, 1862, or equivalent act.	Acres of land grant of 1862 still unsold.	Acres of other land grants still unsold.	Acres in farm and grounds.	Acres under cultivation.	Library.	
								Volumes.	Pamphlets.
1	2	3	4	5	6	7	8	9	10
Alabama Polytechnic Institute, Auburn, Ala.	Charles C. Thach, LL. D.	1872	240,000	0	0	304	90	33,550	5,200
University of Arizona, Tucson, Ariz.	Rufus B. von Klein Smid, Sc. D.	1891	150,000	150,000	387,000	580	365	25,000	15,000
University of Arkansas, Fayetteville, Ark.	John C. Futrall, M. A.	1872	150,000	0	0	120	40	30,000	10,000
University of California, Berkeley, Cal.	Benjamin Ide Wheeler, LL. D.	1869	150,000	1,402	320	779	779	328,000	110,000
Colorado Agricultural College, Fort Collins, Colo.	Charles A. Lory, LL. D.	1879	90,000	45,000	....	1,818	472	40,754	50,000
Connecticut Agricultural College, Storrs, Conn.	Charles L. Beach, B. S.	1881	180,000	0	0	875	215	15,230	1,000
Delaware College, Newark, Del.	Samuel C. Mitchell, Ph. D.	1834	90,000	0	0	277	200	25,900	3,700
University of Florida, Gainesville, Fla.	Albert A. Murphree, LL. D.	1884	90,000	0	0	604	250	34,308	5,100
Georgia State College of Agriculture and the Mechanic Arts, Athens, Ga.	Andrew M. Soule, Sc. D.	1872	270,000	0	0	987	260	49,300	48,000
College of Hawaii, Honolulu, Hawaii	Arthur L. Dean, Ph. D.	1908	([1])	....	....	91	8	22,615	27,159
University of Idaho, Moscow, Idaho	Ernest H. Lindley, Ph. D.	1892	90,000	62,643	151,917	336	300	33,000	....
University of Illinois, Urbana, Ill.	Edmund J. James, LL. D.	1868	480,000	0	0	1,185	949	406,119	103,027
Purdue University, Lafayette, Ind.	Winthrop E. Stone, LL. D.	1874	390,000	0	0	1,035	1,000	46,703	5,000
Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa.	Raymond A. Pearson, LL. D.	1869	240,000	0	0	1,339	1,339	60,800	30,000
Kansas State Agricultural College, Manhattan, Kans.	Henry J. Waters, LL. D.	1863	90,000	7,686	0	733	550	58,650	21,000
University of Kentucky, Lexington, Ky.	Henry S. Barker, LL. D.	1866	330,000	0	0	265	200	28,000	3,800
Louisiana State University and Agricultural and Mechanical College, Baton Rouge, La.	Thomas D. Boyd, LL. D.	1860	210,000	0	0	754	375	38,454	....
University of Maine, Orono, Me.	Robert J. Aley, LL. D.	1868	210,000	0	0	473	175	56,600	....
Maryland State College of Agriculture, College Park, Md.	Albert F. Woods, D. Agr.	1859	210,000	0	0	286	200	17,500	1,000
Massachusetts Agricultural College, Amherst, Mass.	Kenyon L. Butterfield, LL. D.	1867	360,000	0	0	570	300	53,000	....
Massachusetts Institute of Technology, Cambridge, Mass.	Richard C. Maclaurin, Sc. D.	1865	([2]	....	....	....	....	125,356	50,248
Michigan Agricultural College, East Lansing, Mich.	Frank S. Kedzie, D. Sc.	1857	240,000	50,359	0	1,504	681	43,159	9,138
University of Minnesota, Minneapolis, Minn.	Marion LeRoy Burton, LL. D.	1851	120,000	0	14,874	2,337	....	250,361	58,000
Mississippi Agricultural and Mechanical College, Agricultural College, Miss.	William H. Smith, B. S.	1880	210,000	0	0	2,270	600	35,000	128,000
University of Missouri, Columbia, Mo.	A. Ross Hill, LL. D.	1841	330,000	47,287	0	888	700	211,814	56,500
Montana State College of Agriculture and Mechanic Arts, Bozeman, Mont.	James M. Hamilton, M. S.	1893	140,000	67,214	35,933	400	400	15,713	3,000
University of Nebraska, Lincoln, Nebr.	Samuel Avery, LL. D.	1871	90,000	10,766	14,091	369	250	137,050	7,000
University of Nevada, Reno, Nev.	Walter E. Clark, Ph. D.	1874	90,000	0	13	338	263	33,000	15,000

New Hampshire College of Agriculture and Mechanic Arts, Durham, N. H.	Ralph D. Hetzel, LL. D.	1868	150,000	0	0	523	180	35,000	13,000
Rutgers College, New Brunswick, N. J.	W. H. S. Demarest, LL. D.	1864	210,000	0	0	350	214	90,000	17,000
New Mexico College of Agriculture and Mechanic Arts, State College, N. Mex.	George E. Ladd, Ph. D.	1890	150,000	91,909	0	530	175	18,133	33,487
Cornell University, Ithaca, N. Y.	Jacob G. Schurman, LL. D.	1868	990,000	0	0	1,401	700	489,656	....
North Carolina State College of Agriculture and Engineering, West Raleigh, N. C.	Wallace C. Riddick, C. E.	1889	270,000	0	0	490	400	8,500	7,800
North Dakota Agricultural College, Agricultural College, N. Dak.	Edwin F. Ladd, LL. D.	1891	130,000	35,843	0	943	863	26,681	2,100
Ohio State University, Columbus, Ohio	William O. Thompson, LL. D.	1873	630,000	0	0	683	558	176,526	10,000
Oklahoma Agricultural and Mechanical College, Stillwater, Okla.	James W. Cantwell, A. M.	1891	250,000	250,000	250,000	1,000	600	24,526	98,430
Oregon Agricultural College, Corvallis, Oreg.	William J. Kerr, Sc. D.	1865	90,000	920	0	350	259	40,612	92,025
Pennsylvania State College, State College, Pa.	Edwin E. Sparks, LL. D.	1859	780,000	0	0	748	548	63,350	50,000
University of Porto Rico, San Juan, P. R.	Paul G. Miller, Ph. D.	1903	(1)	....	....	243	243	7,500	1,500
Rhode Island State College, Kingston, R. I.	Howard Edwards, LL. D.	1890	120,000	0	0	169	60	22,540	5,000
Clemson Agricultural College, Clemson College, S. C.	Walter M. Riggs, LL. D.	1893	180,000	0	0	1,544	500	18,500	12,000
South Dakota State College of Agriculture and Mechanic Arts, Brookings, S. Dak.	Ellwood C. Perisho, LL. D.	1884	160,000	0	141,076	560	400	21,000	6,500
University of Tennessee, Knoxville, Tenn.	Brown Ayres, LL. D.	1794	300,000	0	0	1,024	500	42,600	44,000
Agricultural and Mechanical College of Texas, College Station, Texas.	William B. Bizzell, D. C. L.	1876	180,000	0	0	2,416	499	11,434	10,000
Agricultural College of Utah, Logan, Utah	Elmer G. Peterson, Ph. D.	1890	200,000	15,516	0	147	147	30,435	36,748
University of Vermont and State Agricultural College, Burlington, Vt.	Guy P. Benton, LL. D.	1801	150,000	0	0	338	150	96,960	36,857
Virginia Agricultural and Mechanical College and Polytechnic Institute, Blacksburg, Va.	Joseph D. Eggleston, A. M.	1872	300,000	0	0	484	380	28,881	78,000
State College of Washington, Pullman, Wash.	Ernest O. Holland, Ph. D.	1892	90,000	77,870	73,990	491	420	57,000	45,000
West Virginia University, Morgantown, W. Va.	Frank B. Trotter, LL. D.	1868	150,000	0	0	1,670	550	60,000	16,300
University of Wisconsin, Madison, Wis.	Charles R. Van Hise, LL. D.	1850	240,000	40	161	928	529	248,000	51,000
University of Wyoming, Laramie, Wyo.	Aven Nelson, Ph. D., acting	1887	90,000	74,695	34,015	1,154	150	40,000	....
Total	....	....	11,050,000	989,150	1,103,390	30,703	19,986	3,912,769	1,432,614
Institutions for colored students.									
State Agricultural and Mechanical College for Negroes, Normal, Ala.	Walter S. Buchanan, A. M.	1875	....	....	....	182	90	7,500	1,300
Branch Normal College, Pine Bluff, Ark.	J. G. Ish., jr., superintendent.	1875	....	....	....	52	30	2,050	500
State College for Colored Students, Dover, Del.	W. C. Jason, D. D.	1892	....	....	....	100	90	1,000	700
Florida Agricultural and Mechanical College for Negroes, Tallahassee, Fla.	Nathan B. Young, A. M.	1887	....	....	....	250	150	2,541	2,000
Georgia State Industrial College, Savannah, Ga.	R. R. Wright, LL. D.	1891	....	....	....	86	51	....	....
Kentucky Normal and Industrial Institute for Colored Persons, Frankfort, Ky.	G. P. Russell, LL. D.	1887	(3)	....	....	300	158	2,000	500

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[1] Hawaii and Porto Rico do not participate in this grant.
[2] Entire grant given under Massachusetts Agricultural College. Income divided, two-thirds to Massachusetts Agricultural College and one-third to the Massachusetts Institute of Technology.
[3] Total grant to the State given under University of Kentucky.

Table 1.—*Statistics of colleges of agriculture and the mechanic arts endowed by acts of Congress approved July 2, 1862, August 30, 1890, and March 4, 1907, for 1916–17*—Continued.

Institutions.	President.	Date of opening of institution.	Acres allotted to States under act of July 2, 1862, or equivalent act.	Acres of land grant of 1862 still unsold.	Acres of other land grants still unsold.	Acres in farm and grounds.	Acres under cultivation.	Library. Volumes.	Library. Pamphlets
1	2	3	4	5	6	7	8	9	10
Institutions for colored students—Continued.									
Southern University and Agricultural and Mechanical College, Baton Rouge, La.	J. S. Clark	1880	......	......	......	500	240	1,370	500
Princess Anne Academy, Princess Anne, Md.	John O. Spencer, LL. D., Baltimore.	1887	......	......	......	118	85	1,850	1,500
Alcorn Agricultural and Mechanical College, Alcorn, Miss.	L. J. Rowan, Ph. D.	1871	(1)	......	......	1,000	260	1,000	......
Lincoln Institute, Jefferson City, Mo.	Benjamin F. Allen, LL. D.	1866	......	......	......	80	40	4,809	1,250
Negro Agricultural and Technical College, Greensboro, N. C.	James B. Dudley, LL. D.	1894	......	......	......	128	100	2,500	7,000
Colored Agricultural and Normal University, Langston, Okla.	John M. Marquess, A. B.	1897	......	......	......	319	251	500	300
Colored Normal, Industrial, Agricultural, and Mechanical College, Orangeburg, S. C.	Robert S. Wilkinson, Ph. D.	1896	(2)	......	......	130	90	500	400
Agricultural and Industrial State Normal School for Negroes, Nashville, Tenn.	William J. Hale	1913	......	......	......	166	100	1,310	544
Prairie View State Normal and Industrial College, Prairie View, Tex.	I. M. Terrell, A. M., principal	1879	......	......	......	1,435	365	2,000	500
Hampton Normal and Agricultural Institute, Hampton, Va.	......	1868	(3)	......	......	1,001	735	38,342	16,450
West Virginia Collegiate Institute, Institute, W. Va.	Byrd Prillerman, A. M.	1892	......	......	......	83	40	775	800
Total	......	......	......	......	......	5,930	2,875	70,047	34,244
Grand total	......	......	11,050,000	989,150	1,103 390	45,633	22,861	3,982,816	1,466,858

[1] Total grant to the State given under Mississippi Agricultural and Mechanical College.
[2] Total grant to the State given under Clemson Agricultural College, South Carolina.
[3] Total grant to the State given under Virginia Agricultural and Mechanical College and Polytechnic Institute.

Institutions.	In college of agriculture and mechanic arts.								In department of agricultural extension.				Total experiment station staff.		Total in college of agriculture and mechanic arts, excluding duplicates.		Total for entire institution, excluding duplicates.	
	In preparatory classes or schools.		In secondary schools of agriculture.		In collegiate and special classes.		Total, counting none twice.		Giving full time to extension work.		Giving part time to extension work.							
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Alabama Polytechnic Institute					78	0	78	0	12	3	9	0	25	0	92	3	92	3
University of Arizona					16	0	16	0	3	0	1	0	16	0	25	0	53	13
University of Arkansas					32	2	32	2	16	4	14	1	18	0	48	6	127	18
University of California			(¹)	(¹)	166	3	166	3	35	3	69	2	111	4	216	4	611	98
Colorado Agricultural College			25	11	52	17	61	28	6	2			30	2	82	25	86	28
Connecticut Agricultural College			14	6	29	7	29	7	8	2	2	0	11	0	44	9	44	9
Delaware College					40	7	40	7	1	1	2	0	12	0	43	8	43	8
University of Florida	6	0			28	0	32	0	5	1	12	0	13	0	49	0	63	4
Georgia State College of Agriculture					25	0	25	0	26	2	10	0			51	2	51	2
College of Hawaii					15	4	15	4					15	4	15	4	15	4
University of Idaho			25	1	46	1	46	2	5	3	5	2	10	5	56	7	85	16
University of Illinois					93	21	93	21	4	2	10	4	103	1	127	24	127	24
Purdue University, Indiana					205	14	205	14	24	5	6	0	63	1	277	20	277	20
Iowa State College of Agriculture and Mechanic Arts			28	13	252	70	275	82	37	10	24	1	79	1	379	94	379	94
Kansas State Agricultural College			40	17	228	69	229	71	30	12	7	0	136	5	264	73	264	73
University of Kentucky					78	10	78	10	7	1	1	0	42	1	49	2	117	12
Louisiana State University and Agricultural and Mechanical College	3	2			62	11	65	13	17	6	10	0	28	2	100	18	122	32
University of Maine					59	8	59	8	5	3	5	1	20	5	30	9	89	17
Maryland State College of Agriculture	8	0			38	0	38	0	8	2	8	0	22	0	67	2	67	2
Massachusetts Agricultural College					73	1	73	1	14	3	30	0	38	0	111	4	111	4
Massachusetts Institute of Technology					328	3	328	3							328	3	328	3
Michigan Agricultural College					153	24	153	24	20	5			45	3	205	31	205	31
University of Minnesota			42	35	107	6	149	41	14	6	0	0	35	3	198	50	546	70
Mississippi Agricultural and Mechanical College			18		82	10	82	10	14	4	4		22	1	122	15	122	15
University of Missouri					60	5	60	5	20	6	5	0	58	2	77	8	212	12
Montana State College of Agriculture and Mechanic Arts	4	10	21	2	38	12	44	14	8	2			24	1	69	17	76	19
University of Nebraska			59	26	47	10	60	26	12	6	6	0	27	0	78	32	221	73

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[1] Secondary and collegiate not segregated.

TABLE 2.—*Professors, instructors, and station staff in colleges of agriculture and the mechanic arts, 1916–17*—Continued.

Institutions.	In college of agriculture and mechanic arts.								In department of agricultural extension.				Total experiment station staff.		Total in college of agriculture and mechanic arts, excluding duplicates.		Total for entire institution, excluding duplicates.	
	In preparatory classes or schools.		In secondary schools of agriculture.		In collegiate and special classes.		Total, counting none twice.		Giving full time to extension work.		Giving part time to extension work.							
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
University of Nevada	......	......	......	......	18	5	18	5	5	3	2	0	15	0	29	10	49	16
New Hampshire College of Agriculture and Mechanic Arts	......	......	28	0	59	4	59	4	13	8	14	2	8	0	35	10	94	14
Rutger's College, New Jersey	10	8	......	......	89	0	99	8	11	3	11	0	58	2	157	13	157	13
New Mexico College of Agriculture and Mechanic Arts	3	3	......	......	26	2	29	5	5	1	5	0	20	0	39	6	39	6
Cornell University, New York	......	......	......	......	240	30	240	30	30	4	3	1	47	1	241	31	852	48
North Carolina State College of Agriculture and Engineering	......	......	......	......	61	0	61	0	2	0	9	0	72	0	124	0	124	0
North Dakota Agricultural College	15	7	28	8	37	8	47	15	7	3	14	6	25	1	84	24	84	24
Ohio State University	......	......	......	......	417	44	417	44	22	13	14	0	......	......	453	57	467	61
Oklahoma Agricultural and Mechanical College	28	19	......	......	58	10	69	19	14	5	......	......	25	0	39	5	39	5
Oregon Agricultural College	......	......	......	......	114	26	114	26	14	2	14	2	32	0	141	28	219	60
Pennsylvania State College	......	......	......	......	251	14	251	14	19	3	......	......	17	0	287	17	287	17
University of Porto Rico	25	14	......	......	24	12	32	15	......	......	......	......	......	......	32	15	32	15
Rhode Island State College	......	......	4	1	28	7	28	7	4	1	......	......	9	2	39	10	39	10
Clemson Agricultural College, South Carolina	......	......	......	......	70	0	70	0	11	0	5	0	20	0	83	0	137	0
South Dakota State College of Agriculture and Mechanic Arts	5	4	28	12	43	10	49	18	8	2	4	0	16	0	71	20	71	20
University of Tennessee	......	......	......	......	48	7	48	7	19	12	6	0	24	2	69	19	224	50
Agricultural and Mechanical College of Texas	......	......	......	......	108	0	108	0	49	18	......	......	65	3	219	18	219	18
Agricultural College of Utah	10	5	14	3	57	14	71	17	9	6	......	......	22	1	80	24	80	24
University of Vermont and State Agricultural College	......	......	......	......	30	2	30	2	5	2	5	0	17	1	54	5	134	13
Virginia Agricultural and Mechanical College and Polytechnic Institute	......	......	......	......	53	0	53	0	13	3	1	0	20	0	37	0	37	0
State College of Washington	2	1	......	......	40	1	42	2	9	6	21	1	24	1	72	9	140	49
West Virginia University	......	......	......	......	39	4	39	4	13	4	12	0	43	2	58	6	58	6
University of Wisconsin	......	......	......	......	87	18	87	18	4	4	26	2	34	2	110	22	500	77
University of Wyoming	7	2	......	......	26	27	27	8	4	2	6	1	15	0	37	10	53	28
Total	126	75	374	135	4,531	560	4,697	666	631	205	412	26	1,631	59	5,792	829	8,618	1,282

State Agricultural and Mechanical College for Negroes, Alabama	7	6	8	8	4	1	16	13	......	......	......	......	......	......	16	13	16	13
Branch Normal College, Arkansas	6	2	5	3	1	0	12	5	......	......	......	......	......	......	12	5	12	5
State College for Colored Students, Delaware	2	2	4	2	6	2	6	2	......	......	......	......	......	......	6	2	6	2
Florida Agricultural and Mechanical College for Negroes	3	8	8	7	10	2	21	17	......	......	......	......	......	......	21	17	21	17
Georgia State Industrial College	5	0	10	2	5	0	20	2	......	......	......	......	......	......	20	2	20	2
Kentucky Normal and Industrial Institute for Colored Persons	7	4	4	4	10	7	10	7	......	......	......	......	......	......	10	7	10	7
Southern University and Agricultural and Mechanical College, Louisiana	2	5	7	6	7	1	16	12	......	......	......	......	......	......	16	12	16	12
Princess Anne Academy, Maryland	4	2	4	2	0	0	8	4	......	......	......	......	......	......	8	4	8	4
Alcorn Agricultural and Mechanical College, Mississippi	5	0	10	4	6	0	21	4	......	......	......	......	......	......	21	4	21	4
Lincoln Institute, Missouri	0	2	7	3	8	13	15	18	......	......	......	......	......	......	15	18	15	18
Negro Agricultural and Technical College, North Carolina	22	0	11	0	16	0	22	0	......	......	......	......	......	......	22	0	22	0
Colored Agricultural and Normal University, Oklahoma	8	8	4	2	4	0	16	10	......	......	......	......	......	......	16	10	16	10
Colored Normal, Industrial, Agricultural, and Mechanical College, South Carolina	4	9	12	2	8	2	23	10	......	......	......	......	......	......	23	10	23	10
Agricultural and Industrial State Normal School for Negroes, Tennessee	8	7	8	8	0	0	16	15	......	......	......	......	......	......	16	15	16	15
Prairie View State Normal and Industrial College, Texas	......	......	16	7	10	4	26	11	......	......	......	......	......	......	26	11	30	17
Hampton Normal and Agricultural Institute, Virginia	......	......	......	......	61	69	61	69	......	......	......	......	......	......	61	69	61	69
West Virginia Collegiate Institute	9	3	10	5	3	1	16	10	......	......	......	......	......	......	16	10	16	10
Total	92	58	128	65	159	102	325	209	......	......	......	......	......	......	325	209	329	215
Grand total	218	133	......	......	4,690	662	5,022	875	631	205	412	26	1,631	59	6,117	1,038	8,949	1,497

TABLE 3.—*Students in colleges of agriculture and the mechanic arts, 1916–17.*

Institutions.	In college of agriculture and mechanic arts (or similar divisions of the institution).																Enrollment of summer school students in all other departments.		Number in all other departments of the institution.		Grand total enrollment, excluding duplicates.	
	In preparatory classes or schools.		In secondary schools of agriculture and in noncollegiate classes.		In degree course (including special students in college courses).		In one or two year collegiate courses.		In graduate courses.		In short or winter courses.		In summer schools (college of agriculture and mechanic arts only).		Total, counting none twice.							
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		23
Alabama Polytechnic Institute	......	......	......	......	818	16	80	0	16	0	......	......	225	323	1,139	339	......	......	......	......	1,139	339
University of Arizona	......	......	......	......	44	2	2	0	......	......	3	0	......	......	49	3	......	......	408	183	457	186
University of Arkansas	......	......	......	......	238	16	......	......	......	......	......	......	......	......	238	16	41	120	404	325	607	369
University of California	......	......	314	0	1,285	20	......	......	45	17	250	0	241	0	2,135	37	949	2,785	1,998	2,516	4,518	5,338
Colorado Agricultural College	......	......	300	82	444	237	......	......	......	......	103	97	37	29	884	455	......	......	47	140	931	595
Connecticut Agricultural College	......	......	69	12	133	9	......	......	......	......	30	2	......	......	232	23	10	488	......	......	242	511
Delaware College	......	......	......	......	226	110	......	......	1	0	......	......	14	62	241	172	11	87	......	......	252	259
University of Florida	......	......	......	......	77	0	......	......	5	0	33	0	......	......	115	0	167	372	471	0	753	372
Georgia State College of Agriculture	......	......	29	0	386	0	15	0	10	0	201	45	6	0	647	45	......	......	......	......	647	45
College of Hawaii	......	......	......	......	51	57	......	......	2	0	......	......	......	......	53	57	......	......	......	......	53	57
University of Idaho	......	......	66	5	197	20	......	......	12	9	19	0	......	......	294	34	63	253	163	225	506	501
University of Illinois	......	......	......	......	2,216	173	......	......	135	0	......	......	163	12	2,355	178	547	425	2,603	1,192	5,205	1,645
Purdue University, Indiana	......	......	......	......	1,752	1	42	1	87	14	118	17	27	27	2,026	60	......	......	141	249	2,109	806
Iowa State College of Agriculture and Mechanic Arts	......	......	322	100	1,793	591	43	21	82	33	......	......	455	228	2,695	973	......	......	......	......	2,695	973
Kansas State Agricultural College	......	......	289	133	1,180	816	......	......	44	24	433	0	219	367	2,017	1,322	......	......	......	......	2,017	1,322
University of Kentucky	......	......	......	......	692	244	27	4	53	9	......	......	84	54	801	295	34	0	225	0	982	295
Louisiana State University and Agricultural and Mechanical College	26	41	11	9	403	0	......	......	14	0	......	......	......	......	454	50	321	289	280	184	1,920	456
University of Maine	......	......	45	0	646	61	0	8	......	......	24	0	......	......	715	69	83	52	310	129	1,064	236
Maryland State College of Agriculture	22	0	......	......	192	1	35	1	17	0	73	65	......	......	319	67	9	179	2	0	330	246
Massachusetts Agricultural College	......	......	......	......	596	27	......	......	......	......	100	8	27	145	723	180	......	......	......	......	723	180
Massachusetts Institute of Technology	......	......	......	......	1,676	10	......	......	45	0	......	......	550	0	1,884	16	......	......	......	......	1,884	16

Mississippi Agricultural and Mechanical College	.....	.....	80	.....	585	.....	.....	.....	6	.....	.....	.....	172	.....	671	.....	140	304	609	.....	1,420	304
University of Missouri	.....	.....	.....	.....	520	35	.....	.....	38	4	197	7	99	7	717	42	518	722	2,106	1,512	2,800	1,549
Montana State College of Agriculture and Mechanic Arts	17	17	172	56	233	121	.....	.....	3	2	.....	.....	11	60	431	256	.....	.....	.....	.....	431	256
University of Nebraska	.....	.....	551	239	310	282	.....	.....	25	0	277	0	.....	.....	955	521	341	406	2,634	1,676	3,141	2,264
University of Nevada	.....	.....	.....	.....	261	162	.....	.....	.....	.....	.....	.....	.....	.....	261	162	12	111	1	40	274	313
New Hampshire College of Agriculture and Mechanic Arts	.....	.....	65	1	126	0	.....	.....	3	0	6	0	.....	.....	200	1	.....	.....	321	144	521	145
Rutgers College, New Jersey	170	33	.....	.....	510	0	2	0	26	1	120	20	172	453	1,000	507	.....	.....	.....	.....	1,000	507
New Mexico College of Agriculture and Mechanic Arts	86	35	11	11	74	29	.....	.....	.....	.....	12	8	.....	.....	174	72	.....	.....	.....	.....	174	72
Cornell University, New York	.....	.....	.....	.....	2,219	301	33	10	.....	.....	261	21	108	274	2,514	555	607	721	2,210	392	5,331	1,668
North Carolina State College of Agriculture and Engineering	.....	.....	.....	.....	533	0	97	0	36	0	62	0	14	0	742	0	77	0	.....	.....	819	0
North Dakota Agricultural College	80	57	188	22	155	77	.....	.....	1	0	215	11	9	5	647	170	75	95	.....	.....	717	265
Ohio State University	.....	.....	.....	.....	1,669	261	244	0	178	55	185	2	201	37	2,306	312	492	451	1,904	1,032	4,536	1,652
Oklahoma Agricultural and Mechanical College	213	152	100	88	443	206	.....	.....	6	1	82	3	.....	.....	844	450	166	357	.....	.....	925	679
Oregon Agricultural College	.....	.....	115	2	830	5	.....	.....	47	0	1,002	608	.....	.....	1,994	615	144	223	256	566	2,394	1,404
Pennsylvania State College	.....	.....	.....	.....	2,061	191	174	0	73	7	120	15	201	903	2,619	1,109	.....	.....	.....	.....	2,619	1,109
University of Porto Rico	270	180	43	50	55	108	.....	.....	.....	.....	.....	.....	.....	.....	368	338	.....	.....	62	6	430	344
Rhode Island State College	.....	.....	.....	.....	271	42	.....	.....	5	1	17	0	.....	.....	293	43	.....	.....	.....	.....	293	43
Clemson Agricultural College, South Carolina	.....	.....	.....	.....	815	0	37	0	1	0	.....	.....	123	1	976	1	.....	.....	.....	.....	976	1
South Dakota State College of Agriculture and Mechanic Arts	45	36	204	61	234	142	.....	.....	5	0	57	0	23	18	553	244	13	101	.....	.....	559	337
University of Tennessee	.....	.....	.....	.....	355	1	.....	.....	2	3	113	2	40	23	502	29	324	1,015	523	199	1,315	1,227
Agricultural and Mechanical College of Texas	.....	.....	487	0	749	0	.....	.....	6	0	.....	.....	21	0	1,263	0	142	0	396	0	1,767	0
Agricultural College of Utah	.....	.....	.....	.....	284	167	113	74	22	7	186	61	11	0	419	248	67	178	.....	.....	486	426
University of Vermont and State Agricultural College	.....	.....	.....	.....	175	41	.....	.....	.....	.....	31	1	.....	.....	206	42	50	311	286	138	567	487
Virginia Agricultural and Mechanical College and Polytechnic Institute	.....	.....	.....	.....	438	0	74	0	15	0	117	0	86	0	730	0	.....	.....	.....	.....	730	0
State College of Washington	.....	.....	620	579	517	3	.....	.....	24	1	153	46	61	13	1,287	740	.....	.....	60	39	1,347	779
West Virginia University	.....	.....	.....	.....	316	45	.....	.....	6	0	146	11	58	2	517	57	218	456	.....	.....	995	759
University of Wisconsin	.....	.....	.....	.....	1,063	282	102	2	117	20	473	3	412	139	1 863	419	1,156	1,431	2,376	1,509	5,001	3,120
University of Wyoming	.....	.....	.....	.....	55	23	.....	.....	.....	.....	3	3	.....	.....	58	26	44	263	107	196	196	455
Total	929	551	4,842	1,727	33,005	5,620	1,120	121	1,291	213	5,755	2,074	4,132	3,275	48,752	13,220	7,090	12,656	27,578	16,434	81,286	40,767

TABLE 3.—*Students in colleges of agriculture and the mechanic arts, 1916-17*—Continued.

Institutions.	In college of agriculture and mechanic arts (or similar divisions of the institution).																Enrollment of summer school students in all other departments.		Number in all other departments of the institution.		Grand total enrollment, excluding duplicates.	
	In preparatory classes or schools.		In secondary schools of agriculture and in noncollegiate classes.		In degree course (including special students in college courses).		In one or two year collegiate courses.		In graduate courses.		In short or winter courses.		In summer schools (college of agriculture and mechanic arts only).		Total, counting none twice.							
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Institutions for colored students.																						
			Industrial.																			
State Agricultural and Mechanical College for Negroes, Alabama	157	171	6	16	8	6	.....	.....	.....	.....	11	20	3	32	185	245	.....	.....	.....	.....	185	245
Branch Normal College, Arkansas	143	202	10	20	0	2	.....	.....	.....	.....	.....	.....	28	165	181	389	.....	.....	.....	.....	181	389
State College for Colored Students, Delaware	19	8	.....	.....	34	28	.....	.....	.....	.....	.....	.....	3	17	56	53	.....	.....	.....	.....	56	53
Florida Agricultural and Mechanical College for Negroes	85	107	31	35	37	16	.....	.....	.....	.....	.....	.....	6	105	159	263	.....	.....	.....	.....	159	263
Georgia State Industrial College	343	112	.....	.....	50	12	.....	.....	.....	.....	.....	.....	.....	.....	393	124	.....	.....	.....	.....	393	124
Kentucky Normal and Industrial Institute for Colored Persons	48	55	.....	.....	48	108	.....	.....	.....	.....	1	25	13	33	110	221	.....	.....	.....	.....	110	221
Southern University and Agricultural and Mechanical College, Louisiana	259	277	.....	.....	17	53	.....	.....	1	0	162	78	21	143	460	551	.....	.....	.....	.....	460	551
Princess Anne Academy, Maryland	47	68	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	22	53	90	.....	.....	.....	.....	53	90
Alcorn Agricultural and Mechanical College, Mississippi	85	31	190	101	124	28	.....	.....	.....	.....	.....	.....	.....	.....	399	160	.....	.....	.....	.....	399	160
Lincoln Institute, Missouri	166	166	.....	.....	17	34	.....	.....	.....	.....	.....	.....	.....	.....	183	200	.....	.....	.....	.....	183	200
Negro Agricultural and Technical College, North Carolina	175	0	.....	.....	50	0	.....	.....	.....	.....	14	0	31	222	270	222	.....	.....	.....	.....	270	222
Colored Agricultural and Normal University, Oklahoma	166	278	.....	.....	20	45	.....	.....	.....	.....	.....	.....	40	199	226	522	.....	.....	.....	.....	226	522
Colored Normal, Industrial, Agricultural, and Mechanical College, South Carolina	271	314	21	24	46	44	.....	.....	.....	.....	.....	.....	19	274	357	656	.....	.....	.....	.....	357	656

							....	....	2	0	......	......	114	530	320	869	....	......	......	......	320	869
School, Texas	345	635	....	....	......	....	....	....	....	....	......	......	244	406	599	1,041	....	......	......	......	599	1 041
Hampton Normal and Agricultural Institute, Virginia	230	185	350	169	......	....	....	....	....	....	......	......	51	407	631	761	....	......	......	......	631	761
West Virginia Collegiate Institute	144	198	14	61	23	11	....	....	....	....	......	......	.....	.....	175	228	....	......	......	......	175	228
Total	2,878	3,115	622	426	485	418	....	....	3	0	188	123	579	2,555	4,757	6,595	....	......	......	......	4,757	6,595
Grand total	3,807	3,666	....	....	33,490	6,044	1,120	121	1,294	213	5,943	2,197	4,711	5,830	53,509	19,815	7,090	12,656	27,578	16,434	86,043	47,362

TABLE 4.—*Undergraduate students in four-year college courses in colleges of agriculture and the mechanic arts, 1916–17.*

Institutions.	Agriculture.	Horticulture.	Forestry.	Veterinary science.	Mechanical engineering.	Civil engineering.	Electrical engineering.	Mining engineering.	Chemical engineering.	Railway engineering.	Sanitary engineering.	Textile engineering.	General engineering.	Architecture.	Household economy.	Chemistry.	Pharmacy.	General science.	Military science and tactics.	
																			Whole number in military drill.	Number in Reserve Officers' Training Course.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Alabama Polytechnic Institute	453	.....	.....	[1] 4	241	45	157	9	20	.....	.....	.....	.....	13	.....	.....	4	30	800	800
University of Arizona	48	.....	.....	.....	36	6	12	27	12	.....	.....	.....	.....	2	3	12	.....	.....	147	100
University of Arkansas	77	.....	.....	.....	32	44	57	1	4	.....	.....	.....	3	.....	16	.....	.....	.....	229	229
University of California	546	(2)	(2)	(2)	328	168	(3)	126	137	(4)	(4)	.....	.....	56	.....	(5)	[1] 92	.....	1,648	(6)
Colorado Agricultural College	246	8	3	71	14	26	8	.....	.....	.....	.....	.....	35	.....	230	.....	.....	9	649	(6)
Connecticut Agricultural College	124	.....	.....	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	202	20
Delaware College	54	.....	.....	.....	14	25	31	.....	.....	.....	.....	.....	5	.....	26	.....	.....	.....	219	(6)
University of Florida	77	.....	.....	.....	7	9	8	.....	1	.....	.....	.....	35	.....	.....	.....	.....	.....	183	6
Georgia State College of Agriculture	180	.....	5	.....	.....	16	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	483	35
College of Hawaii	3	.....	.....	.....	4	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13	(7)	(7)
University of Idaho	83	.....	29	.....	10	14	19	19	11	.....	.....	.....	.....	.....	46	.....	.....	.....	221	17
University of Illinois	1,041	.....	.....	.....	286	204	274	31	154	38	28	.....	.....	311	396	95	.....	1,163	2,106	25
Purdue University, Indiana	644	.....	.....	.....	346	210	317	.....	198	.....	.....	.....	.....	.....	219	.....	21	292	958	(6)
Iowa State College of Agriculture and Mechanic Arts	883	24	48	133	147	151	218	8	49	.....	.....	.....	141	.....	534	.....	.....	112	2,000	(6)
Kansas State Agricultural College	555	.....	.....	78	50	32	64	.....	.....	.....	.....	.....	154	16	616	.....	.....	185	909	.....
University of Kentucky	173	.....	.....	.....	169	71	.....	26	.....	.....	.....	.....	.....	.....	87	.....	.....	.....	300	.....
Louisiana State University and Agricultural and Mechanical College	176	.....	.....	.....	31	13	26	.....	13	.....	.....	.....	86	.....	.....	.....	.....	.....	327	327
University of Maine	150	12	41	.....	82	76	112	.....	76	.....	.....	.....	18	.....	57	54	2	.....	496	38
Maryland State College of Agriculture	64	25	.....	.....	14	22	21	.....	.....	.....	.....	.....	.....	.....	.....	27	.....	1	183	.....
Massachusetts Agricultural College	586	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	500	500
Massachusetts Institute of Technology	.....	.....	.....	.....	340	225	200	67	267	.....	40	.....	17	160	.....	63	.....	4	487	0
Michigan Agricultural College	.....	741	(8)	65	.....	.....	.....	.....	.....	.....	.....	.....	356	.....	359	.....	.....	.....	813	.....
University of Minnesota	382	.....	39	.....	106	103	168	80	103	.....	.....	.....	88	65	325	.....	107	2,481	1,500	(6)
Mississippi Agricultural and Mechanical College	616	.....	.....	.....	32	25	50	.....	.....	.....	.....	.....	197	.....	.....	.....	.....	106	1,252	28
University of Missouri	536	.....	[9] 19	.....	9	31	28	125	19	.....	.....	.....	354	.....	(10)	.....	.....	1,924	836	(6)
Montana State College of Agriculture and Mechanic Arts	88	.....	.....	.....	20	16	50	.....	6	.....	.....	.....	.....	8	73	21	.....	.....	295	30

New Hampshire College of Agriculture and Mechanic Arts	75	12	6		27		59		57						64			209	441	30
Rutgers College, New Jersey	55				17	22	22									45		123	331	331
New Mexico College of Agriculture and Mechanic Arts	41				6	4	11								26			12	125	
Cornell University, New York	1,565			157	955	409								168					1,807	1,807
North Carolina State College of Agriculture and Engineering	249				68	69	89					73				21			500	400
North Dakota Agricultural College	67			16	13	9			4					1	52	12	20	37	252	
Ohio State University	664	(2)	31	[11] 126	175	167	207	40	177				20	31	252		28		1,928	(6)
Oklahoma Agricultural and Mechanical College	142			12	17	12	23						73	13	117			52	400	62
Oregon Agricultural College	534	(3)	84	(3)	73	8	78	93							377		50		942	131
Pennsylvania State College	234	79	28		104	79	174	111	23	8	11			27	129	246			1,142	
University of Porto Rico	20				4	9	6		1				19						311	
Rhode Island State College	70				17	21	27		24				58		38				297	43
Clemson Agricultural College, South Carolina	446				87	25	(8)					18	138	15		16			851	127
South Dakota State College of Agriculture and Mechanic Arts	114				8	12	23								101		30	65	368	166
University of Tennessee	204				10	7	22		8				100		8				306	78
Agricultural and Mechanical College of Texas	354			9	63	101	124		29			16	11	31				26	1,242	950
Agricultural College of Utah	203														125			90	256	(6)
University of Vermont and State Agricultural College	89				25	29	32									40		77	238	
Virginia Agricultural and Mechanical College and Polytechnic Institute	137	7		2	81	31	135	10	9							28		16	445	430
State College of Washington	287	33	14	30	35	18	63	27	19					26	159	39	12	139	686	49
West Virginia University	186				37	55	70	12	4						39				580	22
University of Wisconsin	428				107	77	139	13	63				242		276	112	8	1,793	1,200	(6)
University of Wyoming	31				10	6	5	3							23				132	3
Total	14,348	941	347	773	4,417	2,822	3,256	871	1,505	46	79	107	2,165	964	5,055	831	377	8,959	33,704	8,035

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[1] Three-year course.
[2] Included in agriculture.
[3] Included in mechanical engineering.
[4] Included in civil engineering.
[5] Included in chemical engineering.
[6] Course not organized until 1917.
[7] Instruction in military science and tactics not offered.
[8] Included in horticulture.
[9] Five-year course.
[10] Included in agriculture and general science.
[11] Sixty-four in first 2 years of the 4-year curriculum, 62 in 3-year curriculum.

TABLE 5.—*Students in various courses in colleges of agriculture and the mechanic arts for the colored race, 1916–17.*

Institutions.	Agriculture.	Carpentry.	Machine shop.	Blacksmithing.	Shoemaking.	Broom making.	Wheelwrighting.	Bricklaying.	Painting.	Printing.	Harness making.	Tailoring.	Plastering.	Sewing.	Cooking.	Laundering.	Nursing.	Millinery.	Military drill.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
State Agricultural and Mechanical College for Negroes, Alabama	127	10	6	7	5	0	7	6	2	8	0	8	6	68	60	20	3	0	82
Branch Normal College, Arkansas	38	55	7	42	0	0	8	0	0	0	0	0	0	176	130	77	2	19	0
State College for Colored Students, Delaware	6	10	4	5	0	0	0	0	0	6	0	0	0	16	16	12	0	0	50
Florida Agricultural and Mechanical College for Negroes	188	14	15	8	0	1	10	0	13	14	0	22	0	132	132	5	67	23	0
Georgia State Industrial College	41	42	0	41	81	0	0	80	12	0	0	74	0	43	43	6	0	0	0
Kentucky Normal and Industrial Institute for Colored Persons	141	32	20	0	0	0	0	0	10	18	0	0	0	160	133	4	0	10	103
Southern University and Agricultural and Mechanical College, Louisiana	80	31	8	14	0	25	14	28	0	5	0	0	28	137	124	20	20	0	0
Princess Anne Academy, Maryland	10	12	0	13	0	0	1	0	0	9	0	0	0	32	64	60	0	0	0
Alcorn Agricultural and Mechanical College, Mississippi	206	65	0	61	50	0	61	0	13	0	50	0	0	91	53	55	12	0	0
Lincoln Institute, Missouri	32	45	36	35	16	0	0	14	0	0	0	34	14	117	78	0	0	6	0
Negro Agricultural and Technical College, North Carolina	102	55	47	60	0	10	0	52	0	0	0	0	(1)	0	0	0	0	0	70
Colored Agricultural and Normal University, Oklahoma	259	11	0	9	0	0	0	0	0	0	0	0	0	239	239	0	0	2	0
Colored Normal, Industrial, Agricultural, and Mechanical College, South Carolina	22	51	51	41	48	0	28	66	28	10	48	42	66	186	186	250	12	0	400
Agricultural and Industrial State Normal School for Negroes, Tennessee	382	43	0	5	0	0	0	27	22	0	0	0	0	168	73	0	0	0	0
Prairie View State Normal and Industrial College, Texas	65	70	11	35	26	48	35	0	0	30	26	31	0	209	180	130	0	18	0
Hampton Normal and Agricultural Institute, Virginia	245	45	19	14	4	0	6	31	8	13	0	23	(1)	166	166	84	0	0	580
West Virginia Collegiate Institute	20	50	0	20	0	0	0	18	17	23	0	0	18	175	140	0	0	0	136
Total	2,054	641	224	410	230	83	164	322	125	136	124	234	132	2,115	1,817	723	116	70	1,415

[1] Included in bricklaying.

TABLE 6.—*Number of degrees conferred by colleges of agriculture and the mechanic arts, 1916–17.*

Institutions.	Undergraduate courses.										Graduate courses.									
	Agricultural courses.		Mechanical courses.		Home economics.		All other courses.		Total.		Agricultural courses.		Mechanical courses.		Home economics.		All other courses.		Total.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
1	2	3	4	5	6	7	8		10	11	12	13	14	15	16	17	18	19	20	21
Alabama Polytechnic Institute	44	0	51	0			44	4	139	4	1	0	7	0			3	0	11	0
University of Arizona	8	0	2	0	0	2	15	0	25	2	0	1					2	1	2	2
University of Arkansas	11	0			0	6	36	18	47	24							3	0	3	0
University of California	102	2	103	0			407	352	612	354	11	2	5	0			96	79	112	81
Colorado Agricultural College	27	0	16	0	0	36	18	4	61	40										
Connecticut Agricultural College	24	0							24	0										
Delaware College	9	0	8	0			5	0	22	0							1	0	1	0
University of Florida	16	0	1	0			22	0	39	0	1	0					3	0	4	0
Georgia State College of Agriculture	19	0	2	0			17	0	38	0	1	0							1	0
College of Hawaii			1	0			2	0	3	0										
University of Idaho	18	2	7	0	0	3	26	14	51	19	1	0							1	0
University of Illinois	189	4	210	1	0	85	372	128	771	218	25	0	27	0	0	4	98	32	150	36
Purdue University, Indiana	128	0	172	0			34	45	334	45	4	0	21	0			6	2	31	2
Iowa State College of Agriculture and Mechanic Arts	175	0	132	0	0	91	0	11	307	102	31	0	9	0			17	2	57	2
Kansas State Agricultural College	77	0	28	0	0	105	23	8	128	113	6	0	6	0					12	0
University of Kentucky	36	1	18	19	0	4	57	1	111	25			5	1			5	0	10	1
Louisiana State University and Agricultural and Mechanical College	24	0	19	0			49	27	92	27	1	0					5	5	6	5
University of Maine	32	0	56	1	0	8	7	0	95	9	2	0	2	0					4	0
Maryland State College of Agriculture	16	0	9	0			6	0	31	0							1	0	1	0
Massachusetts Agricultural College	103	1							103	1	8	0							8	0
Massachusetts Institute of Technology			329	1					329	1			39	0					39	0
Michigan Agricultural College	139	0	65	0	0	52	7	0	211	52	12	0							12	0
University of Minnesota	74	0	81	0	0	55	369	213	524	268	11	0	1	0			51	27	63	27
Mississippi Agricultural and Mechanical College	92		38				16		146		2		1				1		4	
University of Missouri	92	7					255	108	347	115							49	14	49	14
Montana State College of Agriculture and Mechanic Arts	18	0	13	0	0	8	6	5	37	13			2	0					2	0
University of Nebraska	44	0	36	0	0	31	170	147	250	178	2	0					25	14	27	14
University of Nevada	3	0			0	1	15	20	18	21							2	1	2	1

TABLE 6.—*Number of degrees conferred by colleges of agriculture and the mechanic arts, 1916-17*—Continued.

Institutions.	Undergraduate courses.										Graduate courses.									
	Agricultural courses.		Mechanical courses.		Home economics.		All other courses.		Total.		Agricultural courses.		Mechanical courses.		Home economics.		All other courses.		Total.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
New Hampshire College of Agriculture and Mechanic Arts	18	0	7	0	0	13	33	12	58	25	1	0	......	......	......	......	2	0	3	0
Rutgers College, New Jersey	16	0	31	0	......	......	30	0	77	0	7	0	......	......	......	......	......	......	7	0
New Mexico College of Agriculture and Mechanic Arts	9	0	4	0	0	2	2	0	15	2	......	......	......	......	......	......	......	......	......	......
Cornell University, New York	266	50	167	0	......	......	411	76	844	126	22	0	4	0	......	......	68	15	94	15
North Carolina State College of Agriculture and Engineering	35	0	8	0	......	......	37	0	80	0	6	0	......	......	......	......	1	0	7	0
North Dakota Agricultural College	15	0	2	0	0	15	13	3	30	18	......	......	......	......	......	......	......	......	......	......
Ohio State University	151	0	117	0	0	66	377	156	645	222	......	......	......	......	......	......	91	15	91	15
Oklahoma Agricultural and Mechanical College	30	0	14	0	0	23	22	22	66	45	......	......	......	......	......	......	3	0	3	0
Oregon Agricultural College	76	1	63	0	0	72	22	11	161	84	8	0	1	0	......	......	......	......	9	0
Pennsylvania State College	156	0	197	0	0	12	34	6	387	18	10	0	24	0	......	......	0	6	34	6
University of Porto Rico	1	0	9	0	......	......	......	......	10	0	......	......	......	......	......	......	......	......	......	......
Rhode Island State College	10	0	20	0	0	2	5	0	35	2	1	0	......	......	......	......	1	0	2	0
Clemson Agricultural College, South Carolina	56	0	46	0	......	......	8	0	110	0	......	......	......	......	......	......	......	......	......	......
South Dakota State College of Agriculture and Mechanic Arts	22	0	6	0	0	14	2	5	30	19	1	0	......	......	......	......	2	0	3	0
University of Tennessee	32	0	9	0	......	......	96	22	137	22	1	0	......	......	......	......	1	3	2	3
Agricultural and Mechanical College of Texas	75	0	60	0	......	......	......	......	135	0	1	0	1	0	......	......	......	......	2	0
Agricultural College of Utah	32	0	9	0	0	18	21	1	62	19	1	0	......	......	......	......	......	......	1	0
University of Vermont and State Agricultural College	19	0	13	0	0	7	57	25	89	32	......	......	......	......	......	......	3	0	3	0
Virginia Agricultural and Mechanical College and Polytechnic Institute	24	0	38	0	......	......	6	0	68	0	1	0	11	0	......	......	......	......	12	0
State College of Washington	40	0	15	0	0	15	33	24	88	39	5	0	2	0	......	......	5	3	12	3
West Virginia University	18	1	12	0	0	1	62	26	92	28	......	......	......	......	......	......	4	1	4	1
University of Wisconsin	108	1	135	0	0	35	354	251	597	287	33	1	17	0	0	5	86	40	136	46
University of Wyoming	4	0	3	0	0	5	12	7	19	12	......	......	......	......	......	......	......	......	......	......
Total	2,733	70	2,382	22	......	787	3,615	1,752	8,730	2,631	217	4	185	1	......	9	635	262	1,037	276

TABLE 7.—Value of property of colleges of agriculture and the mechanic arts,

Institutions.	Land-grant fund of 1862.	Other land-grant funds.	Other permanent funds.	Unsold land grant of 1862.	Other unsold land grants.	Farm and grounds.	Buildings.	Apparatus and machinery.	Library.	Live stock.	Total.
1	2	3	4	5	6	7	8	9	10	11	12
Alabama Polytechnic Institute	$254,500					$30,000	$510,000	$100,000	$85,000	$9,650	$989,150
University of Arizona			$10,500	$450,000	$1,790,000	110,000	435,000	125,000	38,500	8,000	2,967,000
University of Arkansas	132,667					75,000	390,000	200,000	53,000	11,559	862,226
University of California	732,485	$74,962	4,653,529	11,869	800	10,870,680	(1)	2,363,752	250,000	59,153	19,017,220
Colorado Agricultural College	194,444			400,000		470,000	468,955	199,699	57,936	22,900	1,813,934
Connecticut Agricultural College	135,000		1,000			35,000	620,000	108,000	22,000	25,000	946,000
Delaware College	83,000		286,000			400,000	819,000	154,629	53,000	20,000	1,815,629
University of Florida	153,500					185,000	426,000	22,000	65,000	6,000	857,500
Georgia State College of Agriculture	242,202		20,000			585,000	625,000	84,144	68,500	19,870	1,644,716
College of Hawaii	(2)					127,926	70,597	75,415	50,662	4,437	329,037
University of Idaho	507,458	568,010		[3] 626,430	[3]1,519,170	57,775	558,212	300,119	49,500	20,000	4,206,674
University of Illinois	649,013					1,024,247	3,416,243	1,314,670	664,439	96,505	7,165,117
Purdue University, Indiana	340,000		105,593			200,000	1,600,000	540,000	(4)	(4)	2,785,593
Iowa State College of Agriculture and Mechanic Arts	689,530		2,000			209,795	2,758,358	803,277	179,300	75,119	4,717,379
Kansas State Agricultural College	491,747			38,430		261,500	972,324	427,661	113,642	166,150	2,471,454
University of Kentucky	165,000		40,000			207,749	674,635	223,158	50,000	5,000	1,365,542
Louisiana State University and Agricultural and Mechanical College	182,313	136,000	400			177,342	573,790	171,443	49,000	400	1,290,688
University of Maine	118,300		133,750			11,000	712,056	143,268	82,013	11,492	1,211,879
Maryland State College of Agriculture	115,944					42,900	515,000	10,000	30,000	10,000	723,844
Massachusetts Agricultural College	146,000		142,000			93,419	997,872	425,732	89,300	27,165	1,921,488
Massachusetts Institute of Technology	73,000		8,131,700			2,532,867	5,308,423	2,117,378	(4)	(4)	18,163,368
Michigan Agricultural College	991,241			285,000		160,000	975,000	215,000	70,000	50,000	2,746,241
University of Minnesota	616,468	1,174,454			90,000	2,654,166	6,051,603	1,189,523	785,783	100,768	12,662,765
Mississippi Agricultural and Mechanical College	98,575	141,213				157,520	736,272	442,562	54,535	79,079	1,703,756
University of Missouri	365,881	222,000	721,458	189,148		801,385	1,987,470	704,256	423,209	66,205	5,481,012
Montana State College of Agriculture and Mechanic Arts	542,572			672,140	359,330	79,330	290,500	191,455	27,500	28,000	2,191,047
University of Nebraska	593,232	246,896		75,366	98,638	951,639	1,632,341	321,504	247,690	47,407	4,214,713
University of Nevada	107,507	49,657	150,000		16	291,290	274,978	324,785	34,688	32,845	1,265,766
New Hampshire College of Agriculture and Mechanic Arts	80,000		870,000			44,000	520,000	87,000	37,000	10,000	1,648,000
Rutgers College, New Jersey	116,000		868,456			471,000	1,030,412	160,000	86,600	20,000	2,751,868
New Mexico College of Agriculture and Mechanic Arts				241,909		40,740	170,600	150,261	42,343	6,551	652,404

[1] Included in farm and grounds.
[2] Hawaii and Porto Rico do not participate in this grant.
[3] Estimated at the minimum price of $10 per acre.
[4] Included in apparatus and machinery.

TABLE 7.—*Value of property of colleges of agriculture and the mechanic arts, 1916–17*—Continued.

Institutions.	Land-grant fund of 1862.	Other land-grant funds.	Other permanent funds.	Unsold land grant of 1862.	Other unsold land grants.	Farm and grounds.	Buildings.	Apparatus and machinery.	Library.	Live stock.	Total.
1	2	3	4	5	6	7	8	9	10	11	12
Cornell University, New York	$688,576	...	$13,798,551	...	...	$358,440	$6,532,912	$1,789,687	$853,816	[1]	$24,021,982
North Carolina State College of Agriculture and Engineering	125,000	...	...	...	...	108,310	643,535	305,115	26,643	$10,000	1,218,603
North Dakota Agricultural College	1,263,147	...	...	$501,798	...	95,000	595,000	180,000	33,250	30,000	2,698,195
Ohio State University	524,177	$205,481	292,300	...	...	1,855,440	2,817,701	1,209,950	392,805	20,474	7,318,328
Oklahoma Agricultural and Mechanical College	...	...	...	100,000	$100,000	60,000	531,767	288,816	48,000	39,000	1,167,583
Oregon Agricultural College	202,664	...	...	9,000	...	438,715	877,980	251,525	116,011	45,475	1,941,370
Pennsylvania State College	500,000	17,000	101,795	...	...	88,107	1,939,651	632,076	102,500	40,379	3,421,508
University of Porto Rico	[2]	...	10,412	...	...	38,053	135,867	70,750	47,349	6,262	308,693
Rhode Island State College	50,000	...	...	...	...	14,855	324,450	105,659	40,341	3,500	538,805
Clemson Agricultural College, South Carolina	95,900	...	58,539	...	...	118,600	764,065	370,934	31,461	32,403	1,471,902
South Dakota State College of Agriculture and Mechanic Arts	[3] 391,647	[3]	...	[3] 1,410,767	[3]	70,000	450,000	57,000	21,000	15,000	2,415,414
University of Tennessee	400,000	...	5,000	...	...	749,300	455,350	187,344	67,000	35,250	1,899,244
Agricultural and Mechanical College of Texas	209,000	...	...	...	...	149,065	1,503,623	360,787	28,483	49,527	2,300,485
Agricultural College of Utah	...	...	...	...	...	23,200	563,700	170,912	31,813	17,115	806,740
University of Vermont and State Agriculture College	135,000	100,000	828,525	...	...	75,000	1,150,000	122,722	163,500	9,500	2,584,247
Virginia Agricultural and Mechanical College and Polytechnic Institute	344,312	...	...	...	...	80,000	613,000	178,000	26,000	[1]	1,241,312
State College of Washington	349,627	416,895	...	1,557,395	1,479,806	123,799	1,276,822	247,755	51,020	23,580	5,526,699
West Virginia University	115,104	...	...	...	...	300,000	700,000	233,086	48,000	30,000	1,426,190
University of Wisconsin	302,459	232,529	163,315	120	790	2,137,311	4,367,352	1,000,027	567,656	56,352	8,827,911
University of Wyoming	54,725	45,968	...	746,954	340,150	110,000	465,000	215,000	80,000	10,000	2,077,797
Total	14,678,917	3,631,065	31,394,823	7,316,326	5,778,700	30,351,685	62,828,416	21,672,836	6,636,188	1,513,072	185,802,028
Institutions for colored students.											
State Agricultural and Mechanical College for Negroes, Alabama	...	...	...	...	...	35,000	133,300	28,000	6,750	750	203,800
Branch Normal College, Arkansas	...	...	...	...	...	60,000	28,500	23,695	3,350	1,000	116,545
State College for Colored Students, Delaware	...	...	...	...	...	10,000	28,000	1,500	200	2,950	42,650
Florida Agricultural and Mechanical College for Negroes	...	...	...	...	...	18,750	88,050	18,550	1,440	3,750	130,540
Georgia State Industrial College	...	...	...	...	...	9,000	87,000	25,000	1,000	...	122,000
Kentucky Normal and Industrial Institute for Colored Persons	[4]	...	...	...	...	34,000	90,000	8,872	300	5,555	138,727

ical College, Louisiana						21,750	77,170	9,339	400	4,615	113,274
Princess Anne Academy, Maryland						6,000	30,500	5,500	2,162	2,200	46,362
Alcorn Agricultural and Mechanical College, Mississippi	113,575	98,000				10,000	225,000	25,000	1,500	8,500	481,575
Lincoln Institute, Missouri						50,000	145,000	25,500	5,500		226,000
Negro Agricultural and Technical College, North Carolina						35,000	80,000	17,000	5,100	4,425	141,525
Colored Agricultural and Normal University, Oklahoma						16,000	150,000	15,000	525	4,313	185,838
Colored Normal, Industrial, Agricultural, and Mechanical College, South Carolina	95,900					40,000	232,000	15,340	500	6,800	390,540
Agricultural and Industrial State Normal School for Negroes, Tennessee						50,028	94,931	15,329	1,071	4,932	166,291
Prairie View State Normal and Industrial College, Texas						53,050	206,226	500	5,000	9,000	273,776
Hampton Normal and Agricultural Institute, Virginia	172,156		3,087,624			125,000	950,000	190,000	13,079	26,066	4,563,925
West Virginia Collegiate Institute						12,650	145,125	101,154	1,893	2,000	262,822
Total	381,631	98,000	3,087,624			586,228	2,790,792	525,279	49,770	86,856	7,606,190
Grand total	15,060,548	3,729,065	34,482,447	7,316,326	5,778,700	30,937,913	65,619,208	22,198,115	6,685,958	1,599,928	198,408,218

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[1] Included in apparatus and machinery.
[2] Hawaii and Porto Rico do not participate in this grant.
[3] Land grants not separated, total of all.
[4] See University of Kentucky.

TABLE 8.—*Value of additions during the year to equipment of colleges of agriculture and the mechanic arts, 1916–17.*

Institutions.	Permanent endowment.	Buildings.	Library.	Apparatus.	Machinery.	Live stock.	Miscellaneous.	Total.
1	2	3	4	5	6	7	8	9
Alabama Polytechnic Institute		$250	$360	$850	$350	$275	$800	$2,885
University of Arizona		975	3,683	7,011	340		1,559	13,568
University of Arkansas		1,000	500	500	250	1,965		4,215
University of California	$123,806	1,739,901	32,459	67,655	(1)	10,679	205,227	2,179,727
Colorado Agricultural College		12,694	1,400	2,998	3,142			20,234
Connecticut Agricultural College		65,648	433	4,254	1,526	882		72,743
Delaware College		514,000	1,500	2,629	1,200	3,500		522,829
University of Florida		500	3,000	1,000	1,000		350	5,850
Georgia State College of Agriculture		800	1,635	15,472	150	2,560		20,617
College of Hawaii			6,180	1,830	578		126	8,714
University of Idaho		6,885	5,009	3,907	5,152	3,053	3,281	27,287
University of Illinois		981,358	176,646	246,703	(1)			1,404,707
Purdue University, Indiana	105,593	100,000	4,500	12,000	3,300	2,000		227,393
Iowa State College of Agriculture and Mechanic Arts	3,462	161,081	9,200	32,782	(1)	6,884	75,767	289,176
Kansas State Agricultural College		12,350	7,941	29,900	400	27,363	61,389	139,343
University of Kentucky			1,000	7,500			2,500	11,000
Louisiana State University and Agricultural and Mechanical College	400	573	1,288	19,035	708		11,921	33,925
University of Maine		9,278	4,956	1,682	(1)	728		16,644
Maryland State College of Agriculture		515,000	2,000	25,000	10,000	10,000	5,000	567,000
Massachusetts Agricultural College		56,801	5,955		20,838			83,594
Massachusetts Institute of Technology	973,507	3,752,477						4,725,984
Michigan Agricultural College		200,000	2,000	15,000	26,000	8,000		251,000
University of Minnesota	90,584	122,131	35,783	31,300	5,642	6,350	19,682	311,472
Mississippi Agricultural and Mechanical College		8,870	3,211	14,006	5,565	21,764	18,421	71,837
University of Missouri	2,000	32,971	21,181	59,000	(1)	19,333		134,485
Montana State College of Agriculture and Mechanic Arts	29,235		1,500			3,000		33,735
University of Nebraska	29,117	302,431	12,900	6,932	9,391	6,207	8,011	374,989
University of Nevada		80,000	55	842	1,062	21,510	1,094	104,563
New Hampshire College of Agriculture and Mechanic Arts		3,500	500					4,000
Rutgers College, New Jersey	102,068	16,500	5,000	3,600				127,168
New Mexico College of Agriculture and Mechanic Arts			265	980	933			2,148
Cornell University, New York	160,654	225,142	5,094	86,744	(1)	(1)	3,250	479,884
North Carolina State College of Agriculture and Engineering		3,394	1,594	3,341	3,468	1,196	2,371	15,359
North Dakota Agricultural College			2,112	2,607	2,194	22	9,517	16,452
Ohio State University	12,249	172,010	24,298	74,307	29,261	2,811	6,305	321,241
Oklahoma Agricultural and Mechanical College		1,874	1,160	4,482	3,036	3,281	10,877	24,710
Oregon Agricultural College		9,520	5,000	10,177	(1)	8,000		32,697
Pennsylvania State College				22,862				22,862
University of Porto Rico	207		744	4,232	3,082	(2)	1,861	10,126

Rhode Island State College			341	1,200	276		2,425	4,242
Clemson Agricultural College, South Carolina		10,548	490	4,858	(1)			15,896
South Dakota State College of Agriculture and Mechanic Arts			800	500	200	600		2,100
University of Tennessee		810	2,200	2,519	1,412	666	3,263	10,870
Agricultural and Mechanical College of Texas		281,225		79,207				360,432
Agricultural College of Utah			3,175	2,549	1,622	847	3,395	11,588
University of Vermont and State Agricultural College			3,500	2,722	(1)	2,476		8,698
Virginia Agricultural and Mechanical College and Polytechnic Institute		20,600	600	1,000				22,200
State College of Washington	106,272	12,416	1,575	4,364	4,086	1,439		130,152
West Virginia University		10,000	5,000	16,500	(1)	17,500		49,000
University of Wisconsin	12,675	228,234	25,490	38,421	9,744	6,450	31,601	352,615
University of Wyoming	18,646	19,988	3,484	5,049	1,689	2,656	2,717	54,229
Total	1,770,475	9,693,735	438,697	980,979	157,592	208,997	492,710	13,738,185
Institutions for colored students.								
State Agricultural and Mechanical College for Negroes, Alabama			12	52	800		340	1,204
Branch Normal College, Arkansas			50	195	380	435	265	1,325
State College for Colored Students, Delaware					250	1,100		1,350
Florida Agricultural and Mechanical College for Negroes			42	130	396	20		588
Georgia State Industrial College								
Kentucky Normal and Industrial Institute for Colored Persons								
Southern University and Agricultural and Mechanical College, Louisiana		11,300	100	174	3,086	1,300		15,960
Princess Anne Academy, Maryland		1,374	50	300	200	100	2,700	4,724
Alcorn Agricultural and Mechanical College, Mississippi					2,000	500	2,648	5,148
Lincoln Institute, Missouri								
Negro Agricultural and Technical College, North Carolina			100	150	200			450
Colored Agricultural and Normal University, Oklahoma								
Colored Normal, Industrial, Agricultural, and Mechanical College, South Carolina		60,000	200	450		250		60,900
Agricultural and Industrial State Normal School for Negroes, Tennessee			95		149	1,063	2,334	3,641
Prairie View State Normal and Industrial College, Texas		115,000	200	209	10,000	4,505	3,000	128,859
Hampton Normal and Agricultural Institute, Virginia	201,301	150,523	1,320	4,419	(1)	1,785	71,152	430,500
West Virginia Collegiate Institute			200				1,500	1,700
Total	201,301	338,197	2,369	6,079	17,461	7,003	83,939	656,349
Grand total	1,971,776	10,031,932	441,066	987,058	175,053	211,000	576,649	14,394,534

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[1] Included with apparatus.

[2] Decrease of $1,211.50.

TABLE 9.—*Income of colleges of agriculture and the mechanic arts, in 1916–17, for instruction and administration.*

Institutions.	State funds.					United States funds.			From college endowment funds.	From tuition, fees, board and lodging.	From departmental earnings.	From private gifts for support.	From private gifts for permanent improvements and endowment.	Miscellaneous.	Total income, excluding extension and experiment station.[1]
	From endowment granted by the State.	From mill-tax levy for support.	From mill-tax levy for permanent improvements.	From appropriations for support.	From appropriations for permanent improvements.	From land-grant fund of 1862.	From other land grants.	Morrill-Nelson funds of 1890 and 1907.							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Alabama Polytechnic Institute	$1,160	$12,710		$40,800		$20,280		$27,900		$16,107				$21,265	$140,222
University of Arizona				137,342	$75,000	5,209		50,000	$430	28,633	$4,464		$160,000	3,176	464,254
University of Arkansas				110,223		4,200		36,364	17	24,420	12,533			1,915	189,672
University of California	50,949			1,640,437	1,325,440	42,538	$4,123	50,000	122,785	254,036	214,699	$76,541	155,481	61,270	3,998,299
Colorado Agricultural College		125,631				23,362		50,000		23,367				27,377	249,737
Connecticut Agricultural College				40,000	65,648	6,750		50,000		51,808	86,726				300,932
Delaware College				107,653	1,111	4,980		40,000	20,879	29,897	2,458				206,978
University of Florida				43,917		7,790	2,064	25,000	7,630	35,056				2,619	124,076
Georgia State College of Agriculture				60,000		14,954		33,333	1,400	5,869	35,216			1,373	152,145
College of Hawaii				14,000	685			50,000		189	4,020		100	1,281	70,275
University of Idaho				82,354		49,745	54,150	50,000		11,750	14,158				262,157
University of Illinois		2,575,129				32,451		50,000		255,551	177,651			8,159	3,098,941
Purdue University, Indiana		363,162	$124,964			17,000		50,000		90,240	19,662	80		36,355	701,463
Iowa State College				625,000	267,500	35,417		50,000		105,954	127,854		3,000	112,258	1,326,983
Kansas State Agricultural College				460,000	2,350	27,026		50,000		88,931	156,656				784,963
University of Kentucky		58,681		92,000		8,644		42,750		13,315		3,000		421	218,811
Louisiana State University				125,194		9,116	5,440	28,856		18,450		2,500	3,400	39,035	231,991
University of Maine				125,000	16,250	5,915		50,000		78,247	814		4,000	26,531	303,757
Maryland State College of Agriculture				30,000		6,147		50,000		36,233					122,380
Massachusetts Agricultural College	3,313			245,000	107,443	7,300		33,333		69,250	68,286			11,349	545,274
Massachusetts Institute of Technology				100,000		5,307		16,667	246,489	573,715				106,910	1,049,088
Michigan Agricultural College		394,000	110,000		110,000	69,437		50,000		62,564	137,579		90,050		1,023,630
University of Minnesota		293,749		947,311	47,500	19,863	39,712	50,000		537,850	257,583				2,193,568
Mississippi Agricultural and Mechanical College				155,772	2,500	5,915	8,473	22,731		116,929	83,245			40,030	435,595
University of Missouri	46,103			470,491	65,128	18,778		46,875		229,949	71,256			27,386	975,965
Montana State College				74,684		[2]34,081	([3])	50,000		23,596	8,777				191,138
University of Nebraska		465,769	399,327	57,500	85,000	35,771	15,330	50,000		128,437	88,371			62,894	1,388,390

University of Nevada		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					[illegible]
New Hampshire College of Agriculture and Mechanic Arts				34,358		4,800		50,000	35,066	42,774	68,754				235,752
Rutgers College, New Jersey				97,168		5,800		50,000	34,658	58,695		23,848	28,700	4,947	303,816
New Mexico College of Agriculture and Mechanic Arts				32,077			11,910	50,000		14,225	17,514			1,288	127,014
Cornell University, New York				582,131	129,015	34,429		50,000	681,968	927,019	506,692	28,453	98,453	38,732	3,076,892
North Carolina State College of Agriculture and Engineering				105,000		7,500		33,500		78,154	22,419			8,506	255,079
North Dakota Agricultural College		828		61,800		69,540		50,000		11,388	12,909				206,465
Ohio State University	8,297			1,284,699	162,620	15,725	5,875	50,000		209,289	87,197	8,350	319	104,201	1,936,572
Oklahoma Agricultural and Mechanical College				215,152				[3] 50,171		28,035	33,261				326,619
Oregon Agricultural College		[4] 368,225	(4)		65,000	12,893		50,000		81,714	26,711				604,543
Pennsylvania State College				448,323		31,020		50,000	74,096	2,136				91,530	697,105
University of Porto Rico	[5] 10,369			50,000				50,000		1,655	2,719				144,743
Rhode Island State College				40,000	85,500	2,500		50,000		56,115	8,831				242,946
Clemson Agricultural College, South Carolina				[6] 237,944		5,754		25,000		151,275			3,512	7,755	431,240
South Dakota State College				81,000	33,488	[2] 40,980	(2)	50,000		17,761	26,485			28,706	278,420
University of Tennessee				100,849		23,960		38,000	2,569	63,602	6,098	3,199		3,392	241,669
Agricultural and Mechanical College of Texas				404,150	324,105	10,450		37,500		197,051	114,840			62,327	1,150,423
Agricultural College of Utah		83,067			2,684	12,014		50,000		10,522	7,516			2,384	168,187
University of Vermont				50,800		8,130	4,124	50,000	36,122	78,318			102	21,134	248,730
Virginia Polytechnic Institute				65,000	20,333	20,569		33,333		90,752				97,718	327,795
State College of Washington		[4] 294,710	(4)			40,000	52,000	50,000		33,834	56,016				526,560
West Virginia University				220,000	200,000	6,000		40,000		53,949	11,529				531,478
University of Wisconsin	10,575	1,225,048	29,603	62,270	198,933	13,362	12,326	50,000		655,750	339,727	21,800		26,190	2,645,584
University of Wyoming		82,613	28,222			17,070	18,715	50,000		29,747	28			6,087	232,482
Total	160,766	6,441,533	692,116	9,987,399	3,516,233	906,016	236,062	2,261,313	1,270,109	5,835,939	2,921,253	167,771	547,117	1,096,501	36,040,128
Institutions for colored students.															
State Agricultural and Mechanical College for Negroes, Alabama				4,000				22,100		2,497	1,165			170	29,932
Branch Normal College, Arkansas				3,000				13,636		1,295	1,774				19,705
State College for Colored Students, Delaware				3,500				10,000		3,234	1,153			22	17,909
Florida Agricultural and Mechanical College				9,000				25,000		20,227	727	300			55,254
Georgia State Industrial College				8,000				16,667							24,667

[1] When impossible to separate experiment station and extension funds from other college funds, all are included in this table.

[2] No separation of land-grant funds, total under land-grant fund of 1862.

[3] $171 is bank interest.

[4] Total mill-tax levy, including levy for permanent improvements, included in mill-tax levy for support.

[5] Of this amount $427.50 is interest on endowment, the balance is a fund composed of 50 per cent of the fines paid into the courts of Porto Rico.

[6] Privilege of the fertilizer tax.

TABLE 9.—*Income of colleges of agriculture and the mechanic arts, in 1916-17, for instruction and administration*—Continued.

Institutions.	State funds.					United States funds.									
	From endowment granted by the State.	From mill-tax levy for support.	From mill-tax levy for permanent improvements.	From appropriations for support.	From appropriations for permanent improvements.	From land-grant fund of 1862.	From other land grants.	Morrill-Nelson funds of 1890 and 1907.	From college endowment funds.	From tuition, fees, board and lodging.	From departmental earnings.	From private gifts for support.	From private gifts for permanent improvements and endowment.	Miscellaneous.	Total income, excluding extension and experiment station.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Institutions for colored students—Contd.															
Kentucky Normal and Industrial Institute				$18,250		$1,256		$7,250		$10,145					$30,901
Southern University and Agricultural and Mechanical College, Louisiana				12,500				21,144		16,823	$3,337			$177	53,981
Princess Anne Academy, Maryland				4,436				10,000		10,086	862	$100	$1,374	342	27,200
Alcorn Agricultural and Mechanical College, Mississippi				8,000	$5,500	6,815	$5,778	27,209		23,235	3,038				79,635
Lincoln Institute, Missouri				51,974				3,125		2,974	806				58,879
Negro Agricultural and Technical College, North Carolina				15,000				16,500		13,179	10,031			735	55,446
Colored Agricultural and Normal University, Oklahoma				45,000	16,209			5,000						8,601	74,870
Colored Normal, Industrial, Agricultural and Mechanical College, South Carolina				11,500	25,000	5,754		25,000		5,860					73,114
Agricultural and Industrial State Normal School, Tennessee				23,931	75,000			12,000		20,547	5,547				137,025
Prairie View State Normal and Industrial College, Texas				61,255	137,200			12,500		92,075	20,719				323,749
Hampton Normal and Agricultural Institute, Virginia				600		10,329		16,667	$129,498			143,883	352,849	6,567	660,393
West Virginia Collegiate Institute				33,500	8,500			10,000		19,752				721	72,473
Total				313,446	267,409	24,154	5,778	253,858	129,498	241,929	49,159	144,283	354,223	17,335	1,801,132
Grand total	$160,766	$6,441,533	$602,116	10,300,845	3,783,702	930,170	241,840	2,515,161	1,399,607	6,077,808	2,970,412	312,051	901,340	1,113,836	37,841,200

TABLE 10.—*Income of colleges of agriculture and the mechanic arts, in 1916–17, for experiment stations and for extension service.*

Institutions.	Funds for the experiment stations.					Funds for the extension service.					Grand total income of institutions for 1916–17.
	State funds.	United States funds.	Private gifts.	Experiment-station earnings.	Total of experiment-station income.	State funds, Smith-Lever and others.	United States funds.	County, municipality, or associations' funds.	Private gifts and miscellaneous.	Total of extension-service income.	
1	2	3	4	5	6	7	8	9	10	11	12
Alabama Polytechnic Institute	$26,125	$30,000			$56,125	$27,490	$49,402	$42,116		$119,008	$315,355
University of Arizona	28,150	30,000		$10,159	68,309	10,000	13,145	4,998		28,143	560,706
University of Arkansas		30,000		839	30,839	67,370	40,250	75,373	$6,664	189,657	410,168
University of California	[1] 120,796	30,000	$2,300	80,412	233,508	[1] 20,000	30,235		38,013	88,248	4,320,055
Colorado Agricultural College	31,543	30,000			61,543	17,489	18,786	22,350		58,625	369,905
Connecticut Agricultural College	4,500	15,000		7,170	26,670	17,500	12,562		400	30,462	358,064
Delaware College	10,000	30,000		12,279	52,279	14,693	12,412			27,105	286,362
University of Florida		30,000	2,500	3,620	36,120	21,893	21,893			43,786	203,982
Georgia State College of Agriculture						88,651	56,151	125,424	14,406	284,632	436,777
College of Hawaii											70,275
University of Idaho	(1)	30,000		5,578	35,578	5,699	15,700			21,399	319,134
University of Illinois	(1)	30,000		53,263	83,263	58,184				58,184	3,240,388
Purdue University, Indiana	91,000	30,000	105,594	217,840	444,434	30,000	44,707	2,261		76,968	1,222,865
Iowa State College	153,000	30,000		36,113	219,113	111,000	44,432		3,383	158,815	1,704,911
Kansas State Agricultural College	75,000	30,000		54,123	159,123	66,696	36,685			103,381	1,047,467
University of Kentucky	82,553	30,000		124,678	237,231	18,000	48,662	6,200	(2)	72,862	528,904
Louisiana State University	24,500	30,000		27,554	82,054	20,000	35,854			55,854	369,899
University of Maine	22,275	30,000		15,926	68,201	8,047		18,045		26,092	401,050
Maryland State College of Agriculture	30,000	30,000		12,208	72,208	56,203	42,203			98,406	292,994
Massachusetts Agricultural College	36,000	30,000		31,401	97,401	50,000	14,152		5,662	69,814	712,489
Massachusetts Institute of Technology											1,049,088
Michigan Agricultural College	15,000	30,000		17,127	62,127	41,000	43,059		138	84,197	1,169,954
University of Minnesota	179,450	30,000		61,823	271,273	87,315				87,315	2,552,156
Mississippi Agricultural and Mechanical College	35,425	30,000		17,725	83,150	19,020	45,437	44,435		108,892	627,637
University of Missouri	20,213	30,000		29,916	80,129	82,615	52,229	18,857		153,701	1,209,795
Montana State College of Agriculture and Mechanic Arts	66,043	30,000		12,593	108,636	47,410	13,525	12,535	2,600	76,070	375,844
University of Nebraska	27,250	30,000		48,055	105,305	25,000	29,646			54,646	1,548,350
University of Nevada	1,000	30,000			31,000	9,239	11,527			20,766	398,087
New Hampshire College of Agriculture and Mechanic Arts		30,000		10,943	40,943	4,211	13,911			18,122	294,817
Rutgers College, New Jersey	171,106	30,000		27,000	228,106	25,000	24,041	18,200	600	67,841	599,763

[1] Funds are included with those for instruction and administration in Table 9.

[2] $84,300 not included, as the funds do not pass through the university treasurer.

TABLE 10.—*Income of colleges of agriculture and the mechanic arts, in 1916–17, for experiment stations and for extension service*—Continued.

Institutions.	Funds for the experiment stations.					Funds for the extension service.					Grand total income of institutions for 1916–17.
	State funds.	United States funds.	Private gifts.	Experiment-station earnings.	Total of experiment station income.	State funds, Smith-Lever and others.	United States funds.	County, municipality, or associations' funds.	Private gifts and miscellaneous.	Total of extension-service income.	
1	2	3	4	5	6	7	8	9	10	11	12
New Mexico College of Agriculture and Mechanic Arts	5,346	30,000	125	5,992	41,463	6,258	16,258	15,135	1,522	39,173	207,650
Cornell University, New York	(1)	27,000			27,000	148,174				148,174	3,252,066
North Carolina State College of Agriculture and Engineering		30,000		5,387	35,387	42,080	52,080			94,160	384,626
North Dakota Agricultural College	45,000	30,000		30,831	105,831	31,453	21,453	26,958		79,864	392,160
Ohio State University						133,662	55,952	30,050		219,664	2,156,236
Oklahoma Agricultural and Mechanical College	5,154	30,000		5,661	40,815	53,953	39,802	30,750		124,505	491,939
Oregon Agricultural College	28,000	37,700	2,000	11,780	79,480	60,050	33,354	21,250		114,654	798,677
Pennsylvania State College		30,000		48,479	78,479	49,432	77,639			127,071	902,655
University of Porto Rico											144,743
Rhode Island State College	(1)	30,000		3,540	33,540	[1] 1,028	10,400	2,500	2,000	15,928	292,414
Clemson Agricultural College, South Carolina		30,000	2,396	32,396	64,792	38,767				38,767	534,799
South Dakota State College	12,202	30,000		17,148	59,350	30,000	21,306	16,700		68,006	405,776
University of Tennessee	15,000	30,000		15,537	60,537	38,869	48,869	761	2,908	91,407	393,615
Agricultural and Mechanical College of Texas	135,000	30,000		37,735	202,735	141,889	90,255	67,000		299,144	1,652,302
Agricultural College of Utah	15,750	30,000		7,395	53,145	24,750	14,467	8,300	30	47,547	268,879
University of Vermont		30,000		21,392	51,392	8,000	14,169			22,169	322,291
Virginia Polytechnic Institute	21,062	30,000		7,268	58,330	36,000	45,332	42,156		123,488	509,613
State College of Washington	33,965	30,000	2,555	17,957	84,477	15,933	21,958		434	38,325	649,362
West Virginia University	20,000	30,000	125,000	24,585	199,585	72,731	25,050	42,480	1,000	141,261	872,324
University of Wisconsin	(1)	30,000			30,000	297,180	39,636	1,500		338,316	3,013,900
University of Wyoming	1,475	30,000		1,788	33,263	34,449	12,290		225	46,964	312,709
Total	1,588,883	1,369,700	242,470	1,213,216	4,414,269	2,314,383	1,410,876	696,334	79,985	4,501,578	44,955,975
Institutions for colored students.											
State Agricultural and Mechanical College for Negroes, Alabama											29,932
Branch Normal College, Arkansas											19,705
State College for Colored Students, Delaware											17,909
Florida Agricultural and Mechanical College for Negroes						5,000				5,000	60,254
Georgia State Industrial College											24,667
Kentucky Normal and Industrial Institute for Colored Persons											36,901

	....	....	....	....	....	[illegible]	[illegible]	....	....	[illegible]	[illegible]
Princess Anne Academy, Maryland	....	....	....	....	....	....	....	....	....	....	27,200
Alcorn Agricultural and Mechanical College, Mississippi	....	....	....	....	....	....	....	....	....	....	70,685
Lincoln Institute, Missouri	....	....	....	....	....	....	....	....	....	....	58,879
Negro Agricultural and Technical College, North Carolina	....	....	....	....	....	....	....	....	....	....	55,445
Colored Agricultural and Normal University, Oklahoma	....	....	....	....	....	....	....	....	....	....	74,870
Colored Normal, Industrial, Agricultural, and Mechanical College, South Carolina	....	....	150	....	150	1,000	....	....	....	1,000	74,264
Agricultural and Industrial State Normal School for Negroes, Tennessee	....	....	....	....	....	....	....	....	....	....	137,026
Prairie View State Normal and Industrial College, Texas	....	....	....	....	....	....	....	....	....	....	323,749
Hampton Normal and Agricultural Institute, Virginia	....	....	....	....	....	....	....	....	....	....	660,598
West Virginia Collegiate Institute	....	....	....	....	....	....	....	....	....	....	72,473
Total	....	....	150	....	150	11,180	960	....	....	12,140	1,813,428
Grand total	1,588,883	1,369,700	242,620	1,213,216	4,414,419	2,325,563	1,411,836	696,334	79,985	4,513,718	46,769,397

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[1] Funds are included with those for instruction and administration in Table 9.

TABLE 11.—*Disbursement of Morrill-Nelson funds received under acts of Congress approved August 30, 1890, and March 4, 1907, by colleges of agriculture and the mechanic arts for the year ending June 30, 1917.*

Institutions.	Balance on hand July 1, 1916.	Appropriation for year ending June 30, 1917.	Total amount available for the year 1916–17.	Disbursements.							Total expenditures for the year 1916–17.	Balance on hand July 1, 1917.
				For instructions in—						Special preparation of teachers of the elements of agriculture and mechanic arts, schedule G.		
				Agriculture, schedule A.	Mechanic arts, schedule B.	English language, schedule C.	Mathematical science, schedule D.	Natural and physical sciences, schedule E.	Economic science, schedule F.			
1	2	3	4	5	6	7	8	9	10	11	12	13
Alabama Polytechnic Institute	0	$27,900.00	$27,900.00	$2,087.50	$12,500.00	$1,962.50	$4,925.00	$6,425.00	....	....	$27,900.00	0
University of Arizona	$218.57	50,000.00	50,218.57	5,810.90	15,770.00	4,990.00	4,081.66	11,803.34	$6,500.00	....	49,050.90	$1,167.67
University of Arkansas	0	36,363.64	36,363.64	7,459.70	8,454.00	3,950.00	4,377.64	8,130.04	3,992.26	....	36,363.64	0
University of California	0	50,000.00	50,000.00	24,999.72	12,499.92	....	....	10,000.40	....	$2,499.96	50,000.00	0
Colorado Agricultural College	0	50,000.00	50,000.00	16,732.88	11,208.14	5,097.37	2,849.92	8,945.17	5,166.52	....	50,000.00	0
Connecticut Agricultural College	3.88	[1] 50,651.28	50,655.16	20,790.96	3,100.00	3,804.16	2,000.00	14,096.65	5,070.78	1,791.66	50,654.21	0.95
Delaware College	982.73	40,000.00	40,982.73	6,024.88	12,854.90	4,961.66	3,508.48	11,710.93	866.66	....	39,927.60	1,055.13
University of Florida	1.48	25,000.00	25,001.48	3,980.00	6,913.33	2,317.42	2,719.25	7,670.00	1,040.00	360.00	25,000.00	1.48
Georgia State College of Agriculture and Mechanic Arts	0	33,333.34	33,333.34	....	7,040.86	5,500.00	5,300.00	13,092.48	2,400.00	....	33,333.34	0
College of Hawaii	883.07	50,000.00	50,883.07	6,754.33	10,841.47	3,261.40	2,823.97	25,206.83	1,966.60	....	50,854.60	28.47
University of Idaho	0	50,000.00	50,000.00	12,596.10	10,041.46	4,060.00	1,680.00	15,602.44	6,020.00	....	50,000.00	0
University of Illinois	0	50,000.00	50,000.00	15,281.43	13,108.17	....	....	11,891.83	9,718.57	....	50,000.00	0
Purdue University, Indiana	0	50,000.00	50,000.00	18,180.43	4,270.90	2,610.98	4,059.00	16,093.78	3,019.92	1,725.00	50,000.00	0
Iowa State College of Agriculture and Mechanic Arts	0	50,000.00	50,000.00	14,516.68	13,250.00	2,500.00	1,766.66	12,866.66	2,600.00	2,500.00	50,000.00	0
Kansas State Agricultural College	0	50,000.00	50,000.00	....	28,966.68	8,411.19	8,608.37	4,500.02	7,513.74	....	50,000.00	0
University of Kentucky	0	42,750.00	42,750.00	1,860.00	15,490.00	4,930.00	4,396.00	12,870.00	3,204.00	....	42,750.00	0
Louisiana State University and Agricultural and Mechanical College	0	28,856.25	28,856.25	8,098.08	5,667.34	4,000.00	4,047.10	7,043.73	....	....	28,856.25	0
University of Maine	0	50,000.00	50,000.00	11,350.00	13,650.00	4,800.00	4,100.00	11,500.00	2,850.00	1,750.00	50,000.00	0
Maryland State College of Agriculture	0	40,000.00	40,000.00	12,025.00	8,720.00	3,560.00	2,400.00	9,660.00	1,500.00	2,075.00	40,000.00	0
Massachusetts Agricultural College	0	33,333.33	33,333.33	16,200.00	....	1,033.33	....	16,100.00	....	....	33,333.33	0

Massachusetts Institute of Technology	.09	16,666.67	16,666.76	....	7,880.00	2,500.00	4,280.00	2,000.00	....	....	16,660.00	6.76
Michigan Agricultural College	0	50,000.00	50,000.00	14,900.10	14,658.60	2,541.50	4,325.30	12,191.30	1,383.20	....	50,000.00	0
University of Minnesota	0	50,000.00	50,000.00	21,950.00	12,000.00	5,200.00	2,500.00	6,100.00	1,150.00	1,100.00	50,000.00	0
Mississippi Agricultural and Mechanical College	0	22,730.73	22,730.73	6,734.92	5,871.56	3,507.69	3,133.28	3,483.28	....	....	22,730.73	0
University of Missouri	0	35,156.25	35,156.25	22,432.50	....	....	....	10,890.45	1,833.30	....	35,156.25	0
Missouri School of Mines and Metallurgy	0	11,718.75	11,718.75	....	5,874.90	1,333.28	1,666.64	1,983.26	....	....	10,858.08	860.67
Montana State College of Agriculture and Mechanic Arts	0	50,000.00	50,000.00	11,233.30	13,283.34	4,025.00	3,750.00	11,358.36	6,350.00	....	50,000.00	0
University of Nebraska	0	50,000.00	50,000.00	12,374.99	15,783.33	1,333.33	750.00	13,933.35	2,725.00	3,100.00	50,000.00	0
University of Nevada	0	50,000.00	50,000.00	7,353.19	11,372.32	6,199.92	4,599.96	14,774.73	5,699.88	....	50,000.00	....
New Hampshire College of Agriculture and Mechanic Arts	0	50,000.00	50,000.00	16,627.39	14,216.63	3,400.00	....	15,573.50	182.48	....	50,000.00	0
Rutgers College, New Jersey	0	50,000.00	50,000.00	2,210.26	13,477.17	6,400.00	7,580.16	20,324.01	8.40	....	50,000.00	0
New Mexico College of Agriculture and Mechanic Arts	0	50,000.00	50,000.00	14,506.89	12,673.92	5,697.81	3,447.53	9,803.85	2,664.00	1,200.00	49,994.00	6.00
Cornell University, New York	0	50,000.00	50,000.00	11,083.34	20,000.00	1,000.00	1,000.00	9,250.00	1,166.66	6,500.00	50,000.00	0
North Carolina State College of Agriculture and Engineering	0	33,500.00	33,500.00	11,050.00	16,850.00	....	....	5,600.00	....	....	33,500.00	0
North Dakota Agricultural College	0	50,000.00	50,000.00	10,133.06	12,099.84	5,467.57	5,199.88	9,749.79	5,858.20	1,491.66	50,000.00	0
Ohio State University	1.75	50,000.00	50,001.75	11,030.00	11,200.00	3,900.00	4,660.00	14,350.00	4,860.00	....	50,000.00	1.75
Oklahoma Agricultural and Mechanical College	0	[1] 50,170.77	50,170.77	15,344.60	16,668.55	4,206.76	3,550.20	7,511.74	2,888.92	....	50,170.77	0
Oregon Agricultural College	0	50,000.00	50,000.00	10,740.29	10,681.24	2,601.58	3,706.59	12,595.52	8,314.70	1,299.09	50,000.00	0
Pennsylvania State College	1,561.51	50,000.00	51,561.51	13,700.01	11,000.00	900.00	12,100.00	8,500.00	3,600.00	1,299.99	51,100.00	461.51
University of Porto Rico	2,169.22	50,000.00	52,169.22	8,469.52	17,454.79	4,950.00	1,801.30	8,757.37	2,916.76	5,280.00	49,629.74	2,539.48
Rhode Island State College	708.64	50,000.00	50,708.64	13,210.93	10,787.08	4,358.74	3,137.03	15,493.49	3,521.37	200.00	50,708.64	0
Clemson Agricultural College, South Carolina	0	25,000.00	25,000.00	2,917.80	10,197.24	3,662.41	3,820.75	4,371.80	....	....	25,000.00	0
South Dakota State College of Agriculture and Mechanic Arts	0	50,000.00	50,000.00	11,987.70	12,270.95	2,560.00	3,280.00	16,281.35	3,620.00	....	50,000.00	0
University of Tennessee	0	38,000.00	38,000.00	5,430.45	14,568.46	2,300.00	2,433.50	10,547.59	1,980.00	740.00	38,000.00	0
Agricultural and Mechanical College of Texas	0	[1] 37,860.53	37,860.53	12,699.84	11,191.43	3,682.55	875.33	6,755.85	555.57	2,099.96	37,860.53	0
Agricultural College of Utah	0	50,000.00	50,000.00	5,536.10	8,733.22	5,625.07	4,606.93	13,630.37	11,778.31	....	50,000.00	0
University of Vermont and State Agricultural College	0	50,000.00	50,000.00	7,750.00	13,566.66	4,750.00	6,200.00	12,200.00	3,183.34	2,350.00	50,000.00	0
Virginia Agricultural and Mechanical College and Polytechnic Institute	0	33,333.34	33,333.34	4,100.00	10,300.00	1,600.00	5,800.00	10,100.00	1,433.34	....	33,333.34	0
State College of Washington	0	50,000.00	50,000.00	13,700.28	10,395.13	5,783.26	2,466.62	14,526.45	3,128.26	....	50,000.00	0
West Virginia University	305.58	40,000.00	40,305.58	4,015.76	23,533.32	....	3,800.00	7,500.00	1,456.50	....	40,305.58	0
University of Wisconsin	0	50,000.00	50,000.00	20,000.00	20,000.00	2,500.00	2,500.00	2,500.00	2,500.00	....	50,000.00	0
University of Wyoming	0	50,000.00	50,000.00	4,118.53	12,286.68	6,926.67	7,038.33	12,481.46	7,148.33	....	50,000.00	0
Total	6,836.52	[1] 2,252,324.88	2,259,161.40	532,150.34	615,223.71	172,702.15	177,868.28	560,388.17	155,335.66	39,363.22	2,253,031.53	6,129.87

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[1] Bank interest on daily balances as follows: Connecticut Agricultural College, $651.28; Oklahoma Agricultural and Mechanical College, $5,170.77; Agricultural and Mechanical College of Texas, $360.53; total of institutions for white students, $6,182.58; Colored Agricultural and Normal University, Oklahoma, $830.51; Prairie View State Normal and Industrial College, Texas, $119.51; total of institutions for colored students, $950.02; grand total, interest on daily balances, $7,132.60.

TABLE 11.—*Disbursement of Morrill-Nelson funds received under acts of Congress approved August 30, 1890, and March 4, 1907, by colleges of agriculture and the mechanic arts for the year ending June 30, 1917*—Continued.

Institutions.	Balance on hand July 1, 1916.	Appropriation for year ending June 30. 1917.	Total amount available for the year 1916–17.	Disbursements.								Balance on hand July 1, 1917.
				For instructions in—						Special preparation of teachers of the elements of agriculture and mechanic arts, schedule G.	Total expenditures for the year 1916–17.	
				Agriculture, schedule A.	Mechanic arts, schedule B.	English language, schedule C.	Mathematical science, schedule D.	Natural and physical sciences, schedule E.	Economic science, schedule F.			
1	2	3	4	5	6	7	8	9	10	11	12	13
Institutions for colored students.												
Agricultural and Mechanical College for Negroes, Alabama	$18.27	$22,100.00	$22,118.27	$3,766.58	$9,339.28	$1,036.22	$1,255.72	$1,220.30	$3,896.62	$1,400.00	$21,914.72	$203.55
Branch Normal College, Arkansas	11,141.03	13,636.36	24,777.39	3,123.97	5,221.18	1,558.70	1,954.17	2,528.53	3,550.71	138.93	18,076.19	6,701.20
State College for Colored Students, Delaware	1,833.70	10,000.00	11,833.70	4,098.10	2,617.02	1,313.46	785.00	688.76	1,144.14	50.00	10,696.48	1,137.22
Florida Agricultural and Mechanical College for Negroes	1.08	25,000.00	25,001.08	5,750.41	5,703.58	3,975.91	1,860.00	2,321.17	4,600.80	....	24,211.87	789.21
Georgia State Industrial College	2,995.64	16,666.66	19,662.30	3,298.77	7,366.29	3,189.00	759.00	928.98	2,659.39	....	18,201.43	1,460.87
Kentucky Norml and Industrial Institute for Colored Persons	0	7,250.00	7,250.00	1,191.64	1,834.00	1,470.00	800.00	850.00	1,104.36	....	7,250.00	0
Southern University and Agricultural and Mechanical College, Louisiana	11,026.16	21,143.75	32,169.91	8,133.28	7,948.42	5,475.54	2,450.00	800.00	3,048.95	2,008.33	29,864.52	2,305.39
Princess Anne Academy, Maryland	3.33	10,000.00	10,003.33	1,665.89	3,149.57	1,800.00	710.00	689.65	1,168.44	810.00	8,993.55	9.78
Alcorn Agricultural and Mechanical College, Mississippi	174.43	27,269.27	27,443.70	4,931.53	6,722.23	2,906.76	3,276.66	2,900.00	3,860.74	500.00	25,097.92	2,345.78
Lincoln Institute, Missouri	0	3,125.00	3,125.00	630.00	2,040.00	....	....	....	455.00	....	3,125.00	0
Negro Agricultural and Technical College, North Carolina	0	16,500.00	16,500.00	4,135.81	6,261.31	3,860.00	1,290.00	745.38	207.50	....	16,500.00	0
Colored Agricultural and Normal University, Oklahoma	17.02	[1] 5,830.51	5,847.53	983.14	979.96	606.64	366.64	549.96	1,459.05	....	4,945.39	902.14
Colored Normal, Industrial, Agricultural, and Mechanical College, South Carolina	1.76	25,000.00	25,001.76	3,453.70	9,971.07	3,909.10	2,312.49	1,994.53	2,370.19	....	24,011.08	990.68

	2,549.41	12,000.00	14,549.41	1,835.00	1,880.00	2,440.00	1,735.00	1,270.00	3,178.50	....	12,338.50	2,210.91
Prairie View State Normal and Industrial College, Texas	0	[1] 12,619.51	12,619.51	2,089.98	4,319.81	1,109.98	1,579.92	1,535.49	1,984.33	....	12,619.51	0
Hampton Normal and Agricultural Institute, Virginia	0	16,666.66	16,666.66	3,387.50	8,304.16	575.00	0	1,275.00	3,125.00	....	16,666.66	0
West Virginia Collegiate Institute	22.89	10,000.00	10,022.89	2,845.37	3,956.94	....	....	1,048.45	1,842.06	....	9,692.82	330.07
Total	29,784.72	[1] 254,807.72	284,592.44	55,320.67	87,614.82	35,226.31	21,134.60	18,540.71	39,655.78	4,907.26	265,206.64	19,386.80
Grand total	36,621.24	[1] 2,507,132.60	2,543,753.84	587,471.01	702,838.53	207,928.46	199,002.88	581,734.37	194,991.44	44,270.48	2,518,237.17	25,516.67

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[1] Bank interest on daily balances as follows: Connecticut Agricultural College, $651.28; Oklahoma Agricultural and Mechanical College, $5,170.77; Agricultural and Mechanical College of Texas, $360.53; total of institutions for white students, $6,182.58; Colored Agricultural and Normal University, Oklahoma, $830.51; Prairie View State Normal and Industrial College, Texas, $119.51; total of institutions for colored students, $950.02; grand total, interest on daily balances, $7,132.60.

TABLE 12.—*Income from the fund derived from the land grant of 1862 or from land grants made in lieu of the grant of 1862, for the year ending June 30, 1917.*

Institutions.	Acres received under the grant.	Acres unsold.	Amount of fund.	Income for year 1916-17.	Balance unexpended July 1, 1916.	Total available for the year ending June 30, 1917.	Expenditures for the year 1916-17— For salaries.	Expenditures for the year 1916-17— For facilities for instruction.	Expenditures for the year 1916-17— For all purposes.	Balance on hand July 1, 1917.
1	2	3	4	5	6	7	8	9	10	11
Alabama Polytechnic Institute	240,000	0	$254,000.00	$20,280.00	0	$20,280.00	$20,280.00	0	$20,280.00	0
University of Arizona	104,104	104,104	0	[1] 5,209.39	0	5,209.39	5,209.39	0	5,209.39	0
University of Arkansas	150,000	0	132,666.67	3,840.00	$277.00	4,117.00	4,042.00	0	4,042.00	$75.00
University of California	150,000	1,402	732,485.14	42,537.50	0	42,537.50	42,537.50	0	42,537.50	0
Colorado Agricultural College	90,000	45,000	194,443.96	25,970.36	928.29	26,898.65	17,476.08	0	17,476.08	9,422.57
Connecticut Agricultural College	180,000	0	135,000.00	[2] 6,756.98	13.04	6,770.02	6,770.02	0	6,770.02	0
Delaware College	90,000	0	83,000.00	4,980.00	0	4,980.00	4,200.00	$780.00	4,980.00	0
University of Florida	90,000	0	153,500.00	7,790.00	0.02	7,790.02	7,789.67	0	7,789.67	0.35
Georgia State College of Agriculture	270,000	0	242,202.17	16,954.14	0	16,954.14	13,150.00	[3] 3,844.14	16,954.14	0
University of Idaho	90,000	62,643	507,458.48	49,745.05	(4)	49,745.05				
University of Illinois	480,000	0	649,013.20	32,450.66	0	32,450.66	32,450.66	0	32,450.66	0
Purdue University, Indiana	390,000	0	340,000.00	17,000.00	0	17,000.00	17,000.00	0	17,000.00	0
Iowa State College of Agriculture and Mechanic Arts	204,309	0	689,529.57	35,417.26	0	35,417.26	35,417.26	0	35,417.26	0
Kansas State Agricultural College	90,000	7,686	491,746.74	27,025.90	16,745.10	43,771.00	27,603.90	0	27,603.90	16,167.10
University of Kentucky	330,000	0	165,000.00	8,644.50	0	8,644.50	8,644.50	0	8,644.50	0
Louisiana State University and Agricultural and Mechanical College	209,920	0	182,213.03	9,115.69	0	9,115.69	9,115.69	0	9,115.69	0
University of Maine	210,000	0	118,300.00	5,915.00	0	5,915.00	5,915.00	0	5,915.00	0
Maryland State College of Agriculture	210,000	0	115,943.60	6,147.18	0	6,147.18	6,045.00	102.18	6,147.18	0
Massachusetts Agricultural College	360,000	0	219,000.00	7,300.00	0	7,300.00	7,300.00	0	7,300.00	0
Massachusetts Institute of Technology	(5)		(5)	3,650.00	0	3,650.00	750.00	2,900.00	3,650.00	0
Michigan Agricultural College	235,663	50,359	991,241.00	69,437.43	0	69,437.43	69,437.43	0	69,437.43	0
University of Minnesota	94,439	0	616,468.00	19,862.87	21,674.00	41,536.96	28,971.51	0	28,971.51	12,565.45
Mississippi Agricultural and Mechanical College	209,920	0	98,575.00	5,914.61	0	5,914.61	5,914.61	0	5,914.61	0
University of Missouri	277,067	47,287	365,881.19	18,354.09	0	18,354.09	18,353.49	0	18,353.49	0.60
Montana State College of Agriculture and Mechanic Arts	138,954	67,214	[6] 542,572.34	[6] 34,080.95	2,965.84	37,016.79	15,000.00	15,437.44	30,437.44	3,372.38
University of Nebraska	90,000	10,767	593,231.91	35,770.60	9,996.25	45,766.85	41,069.92	0	41,069.92	4,696.93
University of Nevada	90,000	0	107,507.08	3,418.49	1,598.49	5,016.98	0	4,751.26	4,751.26	265.72
New Hampshire College of Agriculture and the Mechanic Arts	150,000	0	80,000.00	4,800.00	0	4,800.00	4,800.00	0	4,800.00	0
Rutgers College, New Jersey	210,000	0	116,000.00	5,800.00	0	5,800.00	5,800.00	0	5,800.00	0
New Mexico College of Agriculture and Mechanic Arts	150,000	91,909	0	0	0	0	0	0	0	0
Cornell University, New York	989,920	0	688,576.12	34,428.80	0	34,428.80	34,428.80	0	34,428.80	0

North Carolina State College of Agriculture and Engineering	270,000	0	125,000.00	7,500.00	0	7,500.00	7,500.00	0	7,500.00	0
North Dakota Agricultural College	130,000	35,843	1,263,146.61	69,540.35	5,697.71	75,238.06	34,152.75	34,439.81	68,592.56	6,645.50
Ohio State University	629,920	0	524,176.50	31,450.59	0	31,450.59	31,450.59	0	31,450.59	0
Oklahoma Agricultural and Mechanical College	150,000	150,000	0	0	0	0	0	0	0	0
Oregon Agricultural College	89,908	920	202,663.99	12,893.05	2,307.27	15,200.32	13,528.69	0	13,528.69	1,671.63
Pennsylvania State College	780,000	0	500,000.00	30,000.00	0	30,000.00	30,000.00	0	30,000.00	0
Rhode Island State College	120,000	0	50,000.00	2,500.00	0	2,500.00	2,500.00	0	2,500.00	0
Clemson Agricultural College, South Carolina	180,000	0	95,900.00	5,754.00	0	5,754.00	5,754.00	0	5,754.00	0
South Dakota State College of Agriculture and Mechanic Arts	160,000	[6] 141,076	[6] 391,646.80	40,979.75	1,722.03	42,701.78	14,676.86	25,694.03	40,370.89	2,330.89
University of Tennessee	300,000	0	400,000.00	23,960.00	0	23,960.00	8,407.33	15,552.67	23,960.00	0
Agricultural and Mechanical College of Texas	180,000	0	209,000.00	11,475.00	0	11,475.00	11,475.00	0	11,475.00	0
Agricultural College of Utah	200,000	51,781	194,451.87	12,013.67	0	12,013.67	12,013.67	0	12,013.67	0
University of Vermont	149,920	0	135,500.00	8,130.00	0	8,130.00	8,130.00	0	8,130.00	0
Virginia Agricultural and Mechanical College and Polytechnic Institute	300,000	0	344,312.00	20,658.72	0	20,658.72	20,658.72	0	20,658.72	0
State College of Washington	89,438	77,870	349,626.59	53,582.57	33,296.06	86,878.63	69,417.50	0	69,417.50	17,461.13
West Virginia University	150,000	0	115,104.17	6,390.00	443.84	6,833.84	6,296.34	0	6,296.34	537.50
University of Wisconsin	240,005	40	302,458.61	13,361.59	0	13,361.59	13,361.59	0	13,361.59	0
University of Wyoming	89,832	74,695	64,725.46	17,069.78	0	17,069.78	16,554.17	515.61	17,069.78	0
Total	10,783,319	1,020,696	1,478,267.80	935,856.52	97,665.03	1,033,521.55	801,349.64	104,017.14	905,366.78	75,212.44
Institutions for colored students.										
Kentucky Normal and Industrial Institute for Colored Persons	(7)	(7)	(7)	1,255.50	0	1,255.50	1,200.00	55.50	1,255.50	0
Alcorn Agricultural and Mechanical College, Mississippi	(8)	(8)	113,575.00	6,814.50	9,304.72	16,119.22	838.88	8,466.14	9,305.02	6,814.20
Colored Normal, Industrial, Agricultural, and Mechanical College, South Carolina	(9)	(9)	95,900.00	5,754.00	5,132.46	10,886.46	1,200.00	3,582.90	4,782.90	6,108.56
Hampton Normal and Agricultural Institute, Virginia	(10)	(10)	172,156.00	10,329.36	0	10,329.36	10,329.36	0	10,329.36	0
Total	....	....	381,631.00	24,153.36	14,437.18	38,590.54	13,568.24	12,104.54	25,672.78	12,917.76
Grand total	10,783,319	1,020,696	15,254,898.80	960,009.88	112,102.21	1,072,112.09	814,917.88	116,121.68	931,039.56	88,130.04

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[1] Income derived from leases and sales of timber.
[2] $6.98 bank interest on daily balances.
[3] $2,000 to the North Georgia Agricultural College.
[4] Deficit of $167.23 for the year 1915-16.
[5] Total grant to the State given under Massachusetts Agricultural College.
[6] All land grants combined.
[7] Total grant to the State given under University of Kentucky.
[8] Total grant to the State given under Mississippi Agricultural and Mechanical College.
[9] Total grant to the State given under Clemson Agricultural College, South Carolina.
[10] Total grant to the State given under Virginia Agricultural and Mechanical College and Polytechnic Institute.

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 42

MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS

DECEMBER, 1918

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NOTE.

The record comprises a general survey in bibliographic form of current educational literature, domestic and foreign, received during the monthly period preceding the date of its publication.

This office can not supply the publications listed in this bulletin, other than those expressly designated as publications of the Bureau of Education. Books, pamphlets, and periodicals here mentioned may ordinarily be obtained from their respective publishers, either directly or through a dealer, or, in the case of an association publication, from the secretary of the issuing organization. Many of them are available for consultation in various public and institutional libraries.

Publications intended for inclusion in this record should be sent to the library of the Bureau of Education, Washington, D. C.

PROCEEDINGS OF ASSOCIATIONS.

1692. **Alabama educational association.** Official proceedings of the thirty-seventh annual convention . . . held at Birmingham, March 28–30, 1918. 154 p. 8°. (Bulletin, vol. 37, no. 1, June 1918) (J. A. Moore, secretary, Jasper, Ala.)

Contains: 1. C. A. Brown: Address of the president [Schools and the war] p. 13–18. 2. Julia C. Lathrop: American children in war times, p. 19–21. 3. N. R. Baker: The superintendent on his job, p. 21–24. 4. Lula Bradford: The human side of the teacher, p. 24–31. 5. Louise Van Sant: How to connect the teaching of history with current events, p. 31–35. 6. J. B. Messick: Mathematics in the war, p. 36–51. 7. E. F. Gochenour: The value of Spanish to the American boy and girl, p. 70–73. 8. L. F. Hawkins: The Smith-Hughes act and vocational education, p. 82–88. 9. Maude Lindsay: An abiding love of literature, p. 95–100. 10. J. R. Kirk: Training all the teachers for all children, p. 100–105.

1693. **National education association.** Journal of proceedings of the fifty-sixth annual meeting . . . Pittsburgh, Pa., June 29–July 6, 1918. Journal of the National education association, 3:1–78, September 1918.

General Sessions.

Contains: 1. Mary C. C. Bradford: The building of the new civilization, p. 33–37. 2. N. C. Schaeffer: The new program of the National education association—an opportunity and a responsibility, p. 37–41. 3. W. L. Ettinger: The life-career motive in education, p. 41–44. 4. Joseph Swain: The nation and the crisis in its schools, p. 44–48. 5. W. C. Bagley: Education and our democracy, p. 54–57. 6. T. E. Finegan: Training for national service, p. 58–61. 7. L. D. Coffman: Competent teachers for American children, p. 61–65. 8. C. G. Pearse: The enlistment of the profession, p. 65–67. 9. Frederick Peterson: The reconstruction of the race, p. 67–70. 10. G. L. Swiggett: Why should the government train for foreign service? p. 70–73. 11. E. A. Smith: Practical education under federal guidance, p. 76–78.

1694. **North Dakota education association.** Proceedings, thirty-first annual session . . . held at Bismarck, October 31–November 2, 1917. Bismarck, N. D., Tribune printing co. [1918] 234 p. 8°. (W. E. Parsons, secretary, Bismarck, N. D.)

Contains: 1. E. R. Edwards: Educational patriotism, a need of the hour, p. 36–40. 2. N. C. MacDonald: The new American school, p. 41-43. 3. W. B. Thomas: Higher learning and the war, p. 48–55. 4. G. A. McFarland: The teacher as a person of affairs, p. 56–62. 5. Frances N. Dial: The possibilities of the dean of women, p. 70–76. 6. E. S. Keene: Probabilities of visual education in secondary schools, p. 86–89. 7. Joseph Kennedy: Professional preparation and advancement of high school teachers, p. 90–98. 8. R. L. Finney: Social science in the junior high school, p. 129–35. 9. W. W. Norton: Certificating of music teachers in North Dakota and progress of effort to secure credits for music in high schools, p. 154–62. 10. A. E. Minard: Report of the committee on grammar, p. 179–87. 11. C. E. Tingley: Practical hints for parent-teachers association, p. 193–203.

1695. **Pennsylvania state educational association.** Report of proceedings, with papers read before the general sessions, department and round table conferences . . . Session at Johnstown, December 26–29, 1917. Lancaster, Pa., Pennsylvania school journal, 1918. 432 p. 8°. (J. P. McCaskey, secretary, Lancaster, Pa.)

For contents of pages 9-167 of this volume, see separate entries for sections—items 428 and 620.

Department of school directors.—Contains: 1. J. B. Richey: The new education. p. 169–71. 2. C. B. Connelly: Vocationalized schools, p. 171–73. 3. S. R. McClure: A director's look around The truancy problem] p. 176–82. 4. C. A. Herrick: Importance of academic training, p. 184-87; General discussion, p. 187–90. 5. T. B. Shankle: New Kensington vocational school, p. 190–92. 6. C. N. Kendall: Some factors that make good school officials, p. 192–96. 7. Samuel Hamilton: The World war and the school, p. 196–204.

Association of secretaries.—8. J. G. Sansom: Standardization of school supplies, p. 211-12. 9. R. E. Richardson: Election and supervision of janitors, p. 213–14. 10. Mrs. E. S. H. McCauley: Secretary's relation to educational system, p. 217–19.

Child study round table.—11. I. R. Krabill: Helping children to study, p. 223–27.

Rural life and nature study.—12. Margaret Welsh: Some experiences with community clubs, p. 228–31. 13. G. A. Works: Fundamentals in agricultural teaching, p. 231–34. 14. G. A. Works. The use of project teaching, p. 237–40.

Library department.—15. Effie L. Power: Modern high-school library, p. 243–46. 16. H. B. Davis: Professional reading of teachers, p. 246–47.

Department of school patrons.—17. Enola B. Guie: Purposes and welfare of the teacher, p. 257–60. 18. E. E. Bach: Immigrant as an educational problem, p. 261–64. 19. O. R. Lovejoy: Working child and educational problem, p. 267–69. 20. S. E. Weber: What Scranton is doing for the immigrant, p. 269–72.

Department of music.—21. C. S. Stone: What should superintendents expect from music supervisors? p. 273–78. 22. Robert Foresman: Musical and unmusical education, p. 279–84.

High school department.—23. W. A. Stecher: Modern viewpoints as to physical education, p. 288–92. 24. Ida N. Hillis: Modern organization for war, p. 295–305. 25. T. C. Blaisdell: Preliminary report on high school course of study, p. 306–12. 26. Frank Krebs: Commercial high school graduate, p. 331–33. 27. W. D. Lewis: How can our instruction in literature affect the reading habits of our pupils? p. 341–45. 28. Ella A. Johnson: Modern languages in junior high schools, p. 353–56. 29. R. F. Bacon: Science instruction in war times, p. 359–62. 30. D. R. Sumstine: Some lessons from the physical examination of drafted men, p. 363–66. 31. C. B. Pennypacker: Organization and control of high-school athletics, p. 366–69.

EDUCATIONAL HISTORY AND BIOGRAPHY.

6. **Carroll, Charles.** Public education in Rhode Island. Providence, R. I., E. L. Freeman company, printers, 1918. 500, [1] p. 8°. [Rhode Island education circulars]

Bibliography: p. [491]-494.

Published jointly by the State board of education, the Commissioner of public schools, and the trustees of the Rhode Island normal school.

7. Dr. Luther Halsey Gulick, 1865–1918: a symposium. American physical education review, 23:413–26, October 1918.

8. **Keay, F. E.** Ancient Indian education; an inquiry into its origin, development, and ideals. London [etc.] Oxford university press, 1918. 191 p. 12°.

Treats the subject under the following subdivisions: Brahmanic education, Education of some special classes, Buddhist education, Muhammadan education, Popular elementary education, Some general conclusions. A bibliography is appended.

9. **Miller, Edward Alanson.** The history of educational legislation in Ohio from 1803 to 1850. [Columbus, 1918] 286 p. illus. (maps) diagrs. 8°.

Thesis (Ph. D).—University of Chicago, 1915.

"Private edition distributed by the University of Chicago libraries, Chicago, Illinois."

"Reprinted from Ohio archaeological and historical quarterly, volume XXVII, nos. 1 and 2, January and April, 1918."

Bibliography: p. 266-71.

0. **Rutledge, Archibald.** A great school and its great master. American education, 22:108–13, November 1918.

The development of Mercersburg academy, a quarter-century of growth.

CURRENT EDUCATIONAL CONDITIONS.

GENERAL AND UNITED STATES.

1. **Brumbaugh, Martin G.** New world-standard of educational efficiency. American education, 22:114–17, November 1918.

An address delivered at the Pittsburgh meeting of the National education association, 1918.

2. **Corson, Oscar T.** Our public schools, their teachers, pupils, and patrons. Columbus, Ohio, The author [1918] 302 p. 12°.

3. **Jones, Arthur J.** Are our schools Prussian in origin? Educational review, 56:271–93, November 1918.

Criticizes Dr. Judd's "Shall we continue to imitate Prussia?" published in School and society, June 29, 1918. Says that "in some respects the Prussian influence apparently retarded the complete development of a truly democratic system." This is evidenced in the over-organization of our schools, and "in the persistence of the idea that an elementary school is a finishing school. There is no evidence to show that this latter idea was directly due to Prussian influence, nor that it ever completely dominated the purpose of the elementary school."

4. **Miller, H. L.** Adequate schooling for the youth of the nation. Inter-mountain educator, 14:8–15, October 1918.

Continued from the September issue.

5. **Sandiford, Peter,** *ed.* Comparative education; studies of the educational systems of six modern nations, by H. W. Foght, A. H. Hope, I. L. Kandel, W. Russell, Peter Sandiford. London and Toronto, J. M. Dent & sons, ltd., 1918. 500 p. 8°.

CONTENTS.—1. United States, by William F. Russell.—2. Germany, by I. L. Kandel.—3. England, by Peter Sandiford.—4. France, by Arthur H. Hope.—5. Canada, by Peter Sandiford.—6. Denmark, by Harold W. Foght.

The present volume aims to present for the leading countries of the world the differentiation of their educational systems, basing the study on an analysis of the factors—historical, geographical, ethnological, political, and economic—which determine this differentiation, and more especially on the theory of the state and society held by each people.

1706. **Schofield, William H.** An American international institute for education. Educational review, 56: 339–51, November 1918.

FOREIGN COUNTRIES.

1707. **[Bagley, W. C.]** The German schools as nurseries of autocracy. National school service, 1: 1, 5–6, November 1, 1918.

German and American systems of education contrasted.

1708. **Ceppellini, Parinio.** War and the school. American journal of school hygiene, 2: 89–94, September 1918.

Translated from the Italian.

A brief summary comment upon the present educational situation in Italy resultant upon the war. The original article appeared in the May 1918 number of "L'Igiene della scuola," under the title "Guerra e scuola."

1709. **Friedel, V. H.** The German school as a war nursery; from the French Pédagogie de guerre allemande, with an introduction by M. E. Sadler. London, Andrew Melrose, ltd. [1918] 270 p. 12°.

Shows how the work of the German schoolmasters made the German people unable to reach the necessary political maturity to assure for themselves, otherwise than by war, an internal and external development in accordance with the general principles of present-day civilization.

1710. **Gollancz, Victor** *and* **Somervell, David.** Political education at a public school. London, W. Collins sons & co. ltd. [1918] 130 p. 12°.

Assumes that the classics are doomed as the basis of a liberal education. Suggests as a substitute therefor the study of politics, history, English literature, and divinity, and describes an experiment in teaching these subjects in an English public school.

1711. **Hanus, Paul H.** Germany indicted. Journal of education, 88: 451–53, November 7, 1918.

Extracts from an article in Boston Herald, October 13, 1918.

An indictment of the German school system by one who was born in Germany.

1712. **Le Verrier, Charles.** Project of the Washington-Lafayette school. School and society, 8: 592–97, November 16, 1918.

This paper was translated from the French by Mrs. Ralph Sanger.

This is the third paper in a series compiled by Henry Fairchild Osborn. The two previous papers told of the conferences in regard to location, character, and aims of the proposed Washington-Lafayette school. The project here given deals with the intellectual education of boys, leaving the physical and moral education for the fourth paper.

1713. **Mornet, D.** La guerre et l'enseignement après la guerre. Revue pédagogique, 73: 79–89, August 1918.

1714. **Pani, Alberto J.** Una encuesta sobre educacion popular . . . con la colaboracion de numerosos especialistas nacionales y extranjeros y conclusiones finales formuladas por Ezequiel A. Chavez, Paulino Machorro Narvaez y Alfonso Pruneda. Contribución al Primer congreso nacional de ayuntamientos. Mexico, Poder ejecutivo federal, 1918. 313 p. 8°.

A valuable study calling attention to some of the difficulties impeding the diffusion of elementary instruction among the Mexican populace, and suggesting solutions. The opinions and recommendations of numerous prominent educators, and of the Mexican press, are given.

1715. **Sellers, Edith.** Boy and girl war-products: their reconstruction. Nineteenth century and after, 84: 702–16, October 1918.

The effects of war conditions on young people in England.

1716. **Sydenham,** *Lord.* Education, science and leadership. Science, n. s. 48: 477–84, November 15, 1918.

Presidential address to the annual meeting of the British science guild, June 19, 1918. Discusses the educational situation in England.

EDUCATION AND THE WAR.

1717. **Ames, J. S.** The trained man of science in the war. Science, 48: 401–10, October 25, 1918.

Work of the universities in the war. What men of science have contributed to the military arms of the Government.

1718. **Blakely, Paul L.** War-aim courses in all the schools. America, 20: 45, October 19, 1918.

1719. **Calvert, A. C.** Public schools in the new war cities. American city, 19: 360–62, November 1918.

Describes the plan adopted by the Government for establishing schools for the children of the workers residing in munition reservations. This plan is to be carried out by the Community organization branch of the Ordnance department.

1720. Junior Red cross in school work. Western journal of education, 24: 9–14, October 1918.

Junior Red cross program, Arrangement of courses, Junior Red cross Americanization program, Junior Red cross lessons, etc.

1721. **Lucas, James Oscar.** Our schools in wartime. Progressive teacher, 24: 9–10, October 1918.

Changes in the course of study due to the war.

1722. **St. Louis. Board of education.** War work of the St. Louis public schools. St. Louis, 1918. 161 p. illus. 8°.

Advance print from the Annual report of the Superintendent of instruction, 1917-18.

1723. **Thayer, V. T.** The schools and the war. Wisconsin journal of education, 50: 218–20, October 1918.

1724. **Williams, L. A.** Forced marches for high schools. High school journal, 1 : 10–12, November 1918.

Suggests that the high school program for the year be one of highly intensified and concentrated effort to do all in our power to help win the war quickly.

EDUCATIONAL THEORY AND PRACTICE.

1725. **Finney, Ross L.** The ultimate aim of education. Educational review, 56 : 305–24, November 1918.

Says that in the present epochal crisis of the world educational theory should adopt "an ultimate aim commensurate with the ideals of democracy and Christianity."

1726. **Kendall, Calvin N.** *and* **Mirick, George A.** How to teach the special subjects. Boston, New York [etc.] Houghton Mifflin company [1918] xvi, 310 p. illus. 12°. Riverside textbooks in education, ed. by E. P. Cubberley)

Affords practical assistance to teachers in the mangement of their morning exercises, special-day programs, the organization of the seal work for the smaller children, and in conducting the instruction in music, drawing, physical training, play, nature study, and agriculture.

1727. **Nutting, P. G.** The principles of education. Scientific monthly, 7 : 448–56, November 1918.

Says that "the interrelations between mental, physical, and moral education and general well-being are well known, but rarely taken cognizance of and never made use of for definite ends." Criticizes the methods of training the future expert.

EDUCATIONAL PSYCHOLOGY: CHILD STUDY.

1728. **Parsons, J. Herbert.** Mind and the nation; a précis of applied psychology. London, John Bale, sons & Danielsson, ltd., 1918. 154 p. 8°.

A brief outline sketch of what the author regards as the scope of psychology in its relations to modern problems, including education; also the aids which psychology provides for elaborating practical schemes of reorganization.

1729. **Taylor, James F.** The classification of pupils in elementary algebra. Journal of educational psychology, 9 : 361–80, September 1918.

"An experimental study of the results of dividing a class into three sections according to their ability. and encouraging each section to do work in proportion to their ability. The author considers in detail the effect of this grouping upon both the poorer and the brighter pupils."

EDUCATIONAL TESTS AND MEASUREMENTS.

1730. **Bobbitt, Franklin.** The building principal in the surveys. Elementary school journal, 19 : 106–20, October 1918.

Emphasizes the neglect of treatment in survey reports of the principal's functions.

1731. **Boston. Dept. of educational investigation and measurement.** Arithmetic, determining the achievement of pupils in common fractions. Boston, Printing department, 1918. 38 p. tables, diagrs. 8°. (Bulletin no. XV. [Boston. School committee] School document no. 5—1918)

1732. ———. English, determining the achievement of pupils in letter writing. Boston, Printing department, 1918. 35 p. 8°. (Bulletin no. XVI. [Boston. School committee] School document no. 6—1918)

1733. **Foote, John M.** Report on spelling and penmanship in country schools. Baton Rouge, La., Ramires-Jones printing co., 1918. 30 p. 16°. (Louisiana. Department of education. Bulletin no. 1, June 1918)

By the supervisor of rural schools under direction of the state superintendent.

1734. **Gray, William S.** The use of tests in improving instruction. Elementary school journal, 19 : 121–42, October 1918.

Describes the procedure which has been adopted by the Elementary school of the University of Chicago in improving its instruction through the use of tests.

1735. **Irwin, H. N.** A preliminary attempt to devise a test of the ability of high school pupils in the mental manipulation of space relations. School review, 26 : 654–70, November 1918.

Continued from October number of School review.

1736. **La Rue, Daniel W.** The rationale of testing intelligence, with special reference to testing in the army. Scientific monthly, 7 : 400–12, November 1918.

1737. **Lohr, Lawrence L.** A Latin form test for use in high school classes. High school journal, 1:7–9, 14–17, November, December 1918.

Prepared as a master's thesis in the School of education of the University of North Carolina.

1738. **Mead, Cyrus D.** *and* **Johnson, Charles W.** Testing practice material in the fundamentals. p. 287–97. 8°.

Reprinted from the Journal of educational psychology, May 1918.

Results of a study testing the comparative values of two kinds of practice material in the fundamentals of arithmetic with 200 pupils divided into groups.

1739. **Stickland, Georgina I.** The influence of practice on the correlation of abilities. Journal of educational psychology, 9 : 393–99, September 1918.

"A study of the reaction of 15 college students to the five tests, color-naming, tapping, adding, multiplying, and word-building. There is a gradual increase in the amount of the correlation up to the fifteenth or twentieth trial, when the correlation remains stationary or even declines somewhat."

SPECIAL METHODS OF INSTRUCTION.

1740. **Knapp, Charles.** Dr. Flexner's critics. Classical weekly, 12 : 9–10, 17–18, 25–26, 33–35, October 14, 21, 28, November 11, 1918.

An editorial review of the arguments for and against Dr. Flexner's Modern school.

1741. **Painter, George S.** The psychology of visual instruction. Journal of the New York state teachers' association, 5 : 210–11, October 1918.

SPECIAL SUBJECTS OF CURRICULUM.

42. **Allen, Genieve M.** Developing and testing appreciation of literature. Education, 39 : 139–41, November 1918.

43. Anthropology as a university subject. New Zealand journal of science and technology (Wellington, N. Z.) 1 : 258–64, September 1918.

A series of letters by noted educational men of England, showing the cultural and educative value of anthropology.

44. **Brooks, Fowler D.** The upper grade history teacher's opportunity. Normal instructor and primary plans, 28 : 47–48, November 1918.

Discusses methods, current events, social and industrial problems, and liberty and our free institutions.

45. **Clément, Marguerite.** L'enseignement du français aux États-Unis. Revue de l'enseignement des langues vivantes, 35 : 345–47, August-September-October 1918.

Tells of the opportunities for Frenchwomen in teaching French in America.

46. **Committee to inquire into the position of natural science in the educational system of Great Britain.** Report of the committee appointed by the prime minister to inquire into the position of natural science in the educational system of Great Britain. Presented to Parliament by command of His Majesty. London, H. M. Stationery office, 1918. 86 p. f°. (Cd. 9011.)

47. **Elbert, J. Aloysius.** Modern language text-books. America, 20 : 93–94, November 2, 1918.

Speaks particularly of German texts.

48. **Evans, George W.** The reconstruction of the mathematical requirement. Mathematics teacher, 11 : 26–33, September 1918.

The mathematical requirement in the high school.

49. **Hathaway, Esse V.** The building of an English course of study. English journal, 7 : 526–32, October 1918.

Work of the Des Moines English association.

50. **Heffron, John L.** The importance of the classics in education, from the standpoint of medicine. School and society, 8 : 518–21, November 2, 1918.

Read before the Classical section of the New York state teachers' association.

51. **Leo,** *Brother*. The feeling for literature. Catholic educational review, 16: 210–19, October 1918.

A paper read at the meeting of the Catholic educational association, San Francisco, July 24, 1918.

The writer says that the problem of English teaching will never be solved until the teachers experience a feeling for literature, a love for good books.

Also in Catholic school journal, 18:251–52, 275, November 1918; Educational review, 56:294–304, November 1918.

52. **Lovell, Grace.** Some psychological aspects of the teaching of Latin. American schoolmaster, 11: 340–49, October 15, 1918.

The contribution of Latin to the aims of education and the adaptation of the course of study to these aims.

53. **Perkins, Albert S.** Report of the committee on questionnaire. Classical journal, 14 : 84–96, November 1918.

Questionnaire regarding classical education sent to teachers of Latin and Greek, school superintendents, instructors of pedagogy and educational psychology in normal schools and colleges. Report read at the 13th meeting of the Classical association of New England, March 23, 1918.

1754. **Pound, Olivia.** High school Latin and the newly formulated aims of second education. Classical journal, 14 : 111–18, November 1918.

Says that Latin makes an important contribution to the pupils' vocational, civic, ed and aesthetic education.

1755. **Scott, Frank W.** The relation of composition to the rest of the curricul English journal, 7 : 512–20, October 1918.

Advocates teaching more rhetoric, more study and reading of good English prose by co students.

1756. **Teaching**, vol. 4, no. 3, October 1918. (Methods in physics and element science.)

Contains: 1. J. P. Drake: Progressive changes in the teaching of physics, p. 4–6. 2. E. A. Stewart: Physical science in the grades, p. 6–10. 3. Florence G. Billig: A study of the atmo phere by an elementary science class, p. 11–14. 4. E. V. Floyd: Household physics: its natu and presentation, p. 15–18. 5. Elizabeth Morgan: Electricity in the home, p. 19–21. 6. J. P. Drake: Laboratory experiments and equipment for high schools, p. 27–32.

KINDERGARTEN AND PRIMARY SCHOOL.

1757. **Aubin, A.** Les exercices de récitation à l'école primaire élémentaire. Revue pédagogique, 73 : 1–23, July 1918.

1758. **Binzel, Alma L.** General character and work of measurements in the grade and the need of these in the kindergarten field. Kindergarten and first grade, 3 : 353–57, November 1918.

Paper given before the International kindergarten union, Chicago.

1759. **White, Jessie.** Progress of the Montessori method in England. School guardian (London) 43 : 277–79, October 19, 1918.

1760. **Woodward, Elizabeth A.** The children's year and the opportunity of the kindergarten for conservation work in congested cities. Kindergarten and first grade, 3 : 366–70, November 1918.

Address given before the Kindergarten department, National education association.

Divided into five parts, as follows: (1) The children's year; (2) Americanization work conducted by kindergartners in congested cities; (3) The part the kindergarten is to play in the child conservation program; (4) The right of every child to be admitted into the public schools at the age of four; and (5) Further suggestions for a war modified program.

RURAL EDUCATION.

1761. **Carothers, W. H.** Preparation of a village superintendent. Journal of education, 88 : 396–98, October 24, 1918.

Discusses problems which are peculiar to village education.

1762. **Finney, Ross L.** The relations of the village principal to his board. American school board journal, 57 : 23–24, November 1918.

"The functions and relations of the supervising principal from his own standpoint. The author writes from many years of experience and observation."

1763. **Fogarty, W. S.** Transportation of school children. American school board journal, 57 : 25–27, 69–70, November 1918. illus.

1764. **Lewis, Charles D.** An investigation of the comparative standing of pupils from one-teacher elementary schools and graded schools when working together in the high school. Kentucky high school quarterly, 4 : 3–16, October 1918.

The writer says in conclusion, "In spite of the fact that Kentucky is behind in education, especially in its rural schools, the pupils from these schools, with a short term and poorly paid and trained teachers, have not only held their own, but slightly surpassed those from the graded schools of towns and villages . . ."

1765. **Pyle, W. H.** *and* **Collings, P. E.** The mental and physical development of rural children. School and society, 8 : 534–39, November 2, 1918.

Says that country girls excel country boys at every age. There is more difference between city and country boys than between city and country girls. There is more difference between country girls and boys than between city girls and boys. It therefore follows that the country girl shows up more favorably mentally than the country boy.

SECONDARY EDUCATION.

1766. **Edmondson, J. B.** Advertising high-school opportunities. American school board journal, 57 : 29–31, November 1918.

The aims of high-school publicity, selection of facts for publicity, etc.

TEACHERS: TRAINING AND PROFESSIONAL STATUS.

1767. **Bagley, W. C.** The status of the classroom teacher. School and home education, 38 : 59–61, November 1918.

A paper presented before the Department of classroom teachers, National education association, Pittsburgh, July 2, 1918.

1768. **Cattell, J. McKeen.** Life insurance and annuities for academic teachers. School and society, 8 : 541–49, November 9, 1918.

Discusses the inability of the Carnegie foundation for the advancement of teaching to pay its annuities and its proposal to establish a contributory and compulsory system of annuities.

1769. **Life, Frank M.** Practice teaching for high-school teachers. School review, 26 : 671–83, November 1918.

Study based on questionnaire sent to the heads of departments of education of the various States throughout the United States. Says that the average number of practice-teaching students per institution per year is vastly less than the capacity for giving this work.

1770. **Martin, T. T.** A practical and ideal county institute—its essential factors. Educator-journal, 19 : 129–33, November 1918.

1771. **National council of normal school presidents.** Report of committee of normal school standards and surveys. Wisconsin journal of education, 50 : 221–24, October 1918.

The report is divided into three parts, as follows (1) The purpose, scope and relations of the normal school; (2) Some proposed standards; and (3) How schools may survey themselves, and cooperate with the committee in revision and closer definition of the standards.

1772. **Purcell, Helen E.** Chorus-girl personalities vs. teaching personalities. American school board journal, 57 : 31–32, November 1918.

Gives the minimum qualities for which superintendents and school boards should look when selecting a teacher.

1773. **Smith, R. R.** The married woman teacher. American schoolmaster, 11 : 356–59, October 15, 1918.

Reprinted, by permission, from The Public, New York city, issue of June 22, 1918. Arguments in favor of the married woman teacher.

1774. **Stimson, Rufus W.** Professional improvement work for teachers of high school agriculture. American education, 22 : 69–71, 117–19, October, November 1918.

1775. **Taylor, W. S.** Project methods in teacher-training courses. School and society, 8 : 487–90, October 26, 1918.

Paper prepared for Department of rural and agricultural education, National education association, Pittsburgh, 1918.

1776. **Updegraff, Harlan.** Teachers' salaries and the increased cost of living. American school board journal, 57 : 22, 63, November 1918.

This paper is an extract from an address delivered before the "Pennsylvania schoolmen's week," *University of Pennsylvania*, April 11-13, 1918.

1777. **[Whitbeck, Ray Hughes.]** Geography teachers. Journal of geography, 17 : 107–10, November 1918.

Discussed under the following headings: The making of a teacher; Education and training; Unsatisfactory results of geography teaching; Need of more geography in normal schools; and Partial remedies.

1778. **Withers, John W.** The training of teachers in service. Elementary school journal, 19 : 95–105, October 1918.

Method of training teachers in St. Louis, Mo. Work of the Harris teachers college.

HIGHER EDUCATION.

1779. **Anderson, L. F.** "University of Michigania." Nation, 107 : 550–51, November 9, 1918.

Review of the act creating the University of Michigania. Strange terminology of its provisions for centralized educational control; remarkable nomenclature of the sciences.

1780. **Coulter, Charles W.** Should the college student borrow? Education, 39 : 170–75, November 1918.

On paying one's way through college. Says that the old commercial maxim is applicable also to academic financiering: "There are times when it pays to borrow."

SCHOOL ADMINISTRATION.

1781. [Answers to a letter by state superintendent F. B. Pearson to the members of the Committee on school policy of the state of Ohio] Ohio educational monthly, 67 : 398–410, October 1918.

The answers of B. F. Stanton, Hiram R. Wilson, and F. V. West, concerning waste in school procedure and other questions of school policy.

1782. **Averill, W. A.** The ages of pupils and their progress through the elementary grades. First steps in statewide educational accounting,, Second paper, April 1918. Albany, N. Y., 1918. 56 p. tables, diagrs. 8°.

Also issued as University of the state of New York bulletin no. 665. 54 p.

A handbook showing the statistical technique, tabulation, and graphic presentation of the salient features of age-progress problems in elementary schools.

1783. **Blakely, Paul L.** Do we want "Prussianized" schools? America, 20 : 106–7, November 9, 1918.

Questions the wisdom of the Smith bill for creating a Department of education.

1784. **Judd, Charles H.** Analyzing textbooks. Elementary school journal, 19 : 143–54, October 1918.

Says that the study of textbooks should become a regular part of the duty of every school officer.

1785. ———. The high-school principal. School review, 26 : 641–53, November 1918.

Methods of supervision described by school principals and superintendents. Writer advocates reporting of experiments in order to stimulate the administrative genius of principals in devising new methods of procedure.

1786. **Lange, Alexis F.** State board of education. Committee of twenty-one on reorganization of public-school system; report of subcommittee on school administration. Sierra educational news, 14 : 455–60, October 1918.

Discusses the minimum essentials of a state system; a state department of education; and the county unit.

1787. The small board of education. School, 30 : 62, 77, October 10, 17, 1918.

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1801. **Rapeer, Louis W.** Rural school health work. Journal of the New York state teachers' association, 5 : 225–31, October 1918.

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1802. **Kleeberger, F. L.** Essentials of physical education in relation to military training in public schools. School and society, 8 : 529–31, November 1, 1918.

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MORAL EDUCATION.

1808. **Green, Jenny Lind.** Character-building content of arithmetic. Mathematics teacher, 11:36–41, September 1918.

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1. **American academy of political and social science.** Rehabilitation of the wounded. Philadelphia, American academy of political and social science, 1918. 164 p. 8°. (Annals of the American academy of political and social science, vol. 80, no. 169, November 1918)

Contains: 1. F. D. Patterson: Industrial training for the wounded, p. 40–42. 2. Margaret A. Neall: Philadelphia school for occupational therapy, p. 58–61. 3. C. A. Prosser: A federal program for the vocational rehabilitation of disabled soldiers and sailors, p. 117–22. 4. J. P. Munroe: The advantages of national auspices of re-education, p. 123–30. 5. T. B. Kidner: Vocational work of the invalided soldiers' commission of Canada, p. 141–49. 6. Henry Chellew: Plans for the education of disabled and convalescent officers of British and allied forces, p. 153–57.

2. **Chaney, Augusta Scott.** The modern status of the war cripple. Southern workman, 47: 529–34, November 1918.

3. **U. S. Federal board for vocational education.** To the disabled soldier and sailor in the hospital. Washington, Government printing office, 1918. 16 p. 8°. (Monograph no. 1, Vocational rehabilitation series no. 1, November 1918.)

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Work of the Federal board for vocational education described; rehabilitation of disabled soldiers, etc.

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5. **Dugas, L.** Les idées de Stendhal sur l'éducation des femmes. Éducation, 10: 133–47, June-September 1918.

6. **Larrison, Eleanor R.** The association of boys and girls in the teens. Education, 39: 142–48, November 1918.

Discusses coeducation in secondary schools.

7. **Molloy, Mary A.** Catholic colleges for women. Catholic educational review, 16: 220–34, October 1918.

A paper read before the Conference of women's colleges at the annual meeting of the Catholic educational association, San Francisco, Cal., June 24, 1918.

Discusses the subject of cooperation and centralization among Catholic colleges for women.

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One of the prize essays written for the American association to promote the teaching of speech to the deaf; the subject being: "Teaching and training little deaf children in the home from infancy to school age." To be continued.

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Continued from September number.

EXCEPTIONAL CHILDREN.

1851. **Nicholson, A. F.** The present day problem of juvenile delinquency. Child (London) 9: 1-16, October 1918.

Conditions in England described.

EDUCATION EXTENSION.

1852. **Bosanquet, Helen.** A great opportunity. Contemporary review, 114: 396-401, October 1918.

A plea to men and women who have enjoyed a liberal education to take a large share in the work of the continuation schools of the future, including the active teaching and guiding of young people.

1853. **Moyer, James A.** Correspondence courses, department of university extension. Educational standards, 6: 21-25, November 1918.

The work of the department of university extension of the Massachusetts board of education.

1854. **Wilson, G. M.** Extra summer session credit. School and society, 8: 444-49, October 12, 1918.

Gives a summary of the practices of 55 higher institutions with reference to permitting students of maturity and ability to carry extra work in the summer session.

LIBRARIES AND READING.

1855. **Barnes,** ***Mrs.*** **Harold.** Learning patriotism from books. Public libraries, 23: 416-19, November 1918.

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1856. **Clapp, John M.** Reading aloud: War-time suggestions. [Charleston, Ill., Eastern Illinois state normal school, 1918] 13 p. 8°. (The Normal school bulletin, no. 61, July 1, 1918)

1857. **Koch, Theodore W.** Books and bullets. American review of reviews, 58: 503-8, November 1918.

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1858. **Ridington, John.** The university, the university library, and the returned soldier. Library journal, 43: 808-15, November 1918.

1859. **Stockbridge, Frank Parker.** Giving the soldiers books to read. World's work, 37: 83-86, November 1918.

The American library association's war service; our army a reading army; books in 40 different languages and on every conceivable subject; duties of a camp librarian; giving the soldier the book he needs when he wants it.

Wm
C. Clark

DEPARTMENT OF THE INTERIOR
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INSTRUCTION IN ART IN THE UNITED STATES

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INSTRUCTION IN ART IN THE UNITED STATES.

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Contents.—Introductory—Art instruction in elementary schools—Art instruction in high schools—Art instruction in universities—Art museums and art schools.

The term "art education" is used somewhat loosely in connection with a wide range of school activities. Any discussion of the subject must therefore define somewhat arbitrarily the aspects with which it will deal.

This chapter includes the following:

1. Drawing, painting, and constructive and decorative design, whether used to record facts of form and structure in connection with industrial and scientific work, or to interpret forms and appearances pictorially or decoratively.

2. The advancement of artistic appreciation, whether gained by technical practice or by acquaintance with good art through some approach other than that of actual production, or by a combination of these methods. In the discussion of the advancement of artistic appreciation without technical production, the whole field of fine and industrial art is included. In the discussion of technical work, only the graphic arts as just defined are taken into direct consideration.

The material here presented is based upon the replies to inquiries regarding recent changes in aims and methods of art instruction, sent to State commissioners of education, and to the superintendents of schools in the three largest cities of each State, to the art departments of State and other leading universities, and upon an examination of a wide range of courses of study and of reports of art associations and educational meetings where art was a subject of discussion. A survey of this material shows a number of significant changes, which may be broadly grouped as follows:

1. The changes due to the normal development to be expected along lines where progress has long been continuous. Prominent among these are—

(*a*) A clearer understanding, which has come through experiments and longer experience, regarding what art instruction should accomplish as a part of general education, and the consequent revision and improvement of methods of teaching. These have been especially evident in elementary and secondary schools and in colleges.

(*b*) A better knowledge of the social and industrial values of advanced art training for those with special aptitude, and the consequent modification of advanced art education to meet these needs. These modifications are noticeable in the programs of vocational schools and professional art schools, of art departments in colleges, in the broader range of educational activities carried on by art museums, in the associations recently formed for bringing art instruction into closer relation with social and industrial needs, and in new art schools intimately related to community interests.

2. Changes due to the present abnormal conditions of war. Among these are—

(*a*) A revaluation of the effects of art in shaping public opinion and in stimulating patriotic activities, and in reenforcing those attitudes of mind which we include under the term "morale."

(*b*) A revision of methods of drawing in connection with constructive work, because of the shortcomings of methods which have been in fairly common use; shortcomings which attempts to train enlisted men in constructive work have made evident. These attempts have emphasized the fact that ability to read working drawings accurately and to make dimensioned sketches, mechanical or topographical, with facility, is not common, even among those who have had high-school courses in drawing. It is an ability which the present crisis imperatively demands.

(*c*) A realization of the probability that in the commercial revival which is certain to follow the war, and because of the consequent need of highly skilled designers in the industries, the United States must depend more than heretofore upon those trained in its own schools, and must therefore begin even among pupils of secondary school age to conserve and direct special talent when it is discovered.

These changes are considered in detail under the separate divisions which follow.

ART INSTRUCTION IN ELEMENTARY SCHOOLS.

Art instruction in elementary grades has been quite general throughout the country for some years. Recent changes have been mainly along the line of normal development. Among the important directions in which progress is apparent are the following:

The tendency emphasized above all others in the returns received from superintendents of schools and from supervisors of art instruction is in the direction of bringing art instruction into more direct and intimate connection with school and home and community interests. The specific points of contact most emphasized are the following:

1. More use of drawing to illustrate other school subjects. This indicates a tendency to go to the other school interests for themes for drawing, instead of selecting themes arbitrarily for the purpose of developing a logical but detached course in drawing. In this way the correlation with other subjects becomes the first business of the art supervisor, and is not left to chance.

2. An especially close correlation with the manual arts. This means that much of the drawing and design is directly concerned with problems in industrial work and in the household arts. In many places this correlation is being promoted in an administrative way by uniting the departments of drawing and of the industrial arts under one supervisor.

3. More definite attention to developing appreciation of good pictorial art and of excellent constructive and decorative design. The majority of returns indicate that the sort of appreciation desired is that which will increase the range and quality of one's enjoyment in his surroundings, and especially will enable one to exercise good taste in home planning and furnishing, in promoting community projects, and in producing material for the market.

These purposes are not new in elementary art instruction. Published courses have long stated them more or less definitely as aims, but an analysis of recently formulated courses shows an essential difference in method, namely, a tendency to abandon a detached course of instruction planned mainly from the point of view of logical progression in the subject in the hope that the principles and practice gained thereby will be carried over and put to use in fields where they are needed. This somewhat formal work is being displaced by courses in which principles and practice are concerned mainly with problems selected from the field of immediate needs. This procedure appeals to the instant interests of a far greater number of children, and its direct result is to make drawing a general rather than a special school subject.

The history of drawing in public education has been such as to create a tradition that it is a special subject in the sense that it is possible of attainment only for those who have special talent, and that it has value mainly for those who may later have occasion as artists to use it. This tradition has tended to take the vitality out of the instruction given by grade teachers because they felt that drawing was neither possible nor worth while for the majority. It has also tended to some extent at least, to concentrate the enthusiasm of the special teacher with art-school training upon the few pupils who displayed unusual artistic apitudes.

The last two years have contributed considerably toward making drawing a general school subject as regards its availability and value for the *majority of children*. This contribution has been made partly through psychological study of special talent and partly through results obtained by applying general pedagogical principles to the teaching of drawing. Observation shows that the mere sight of nature's appearances awakens in certain children a peculiar type of experience and of interest, one characteristic of which is a strong desire to represent graphically what they have seen. In the case of these children the simple presentation of objects arouses this peculiar interest, together with a corresponding desire to express it by reproducing the appearances in drawing or painting. They are the children who have what is termed "special talent." When analyzed, this talent appears to be essentially a special type of interest in appearances of things and not a special manual ability or skill. The skill in drawing which these children display seems to be a natural outgrowth of the practice which this peculiar interest in appearances and the consequent desire to draw them promotes.

This view is supported by the fact that if an interest of another sort, but equally strong can be awakened in connection with the appearance of objects, for example an interest in their construction, which can be expressed best by drawing, as in the frequent cases of children greatly interested in engines, bridges, boats, etc., the drawing will be equally good, although different in type.

Experiments indicate that if we can awaken an equal, although different, interest on the part of children without so-called "talent" for drawing, they will develop equal skill, provided the interest is of a sort that can be most adequately expressed by drawing. Frequently children who show under ordinary circumstances no indications of talent, when the appeal to their particular interest is found, equal or surpass in skill those who appeared at first to be gifted artistically. Elementary school courses in all subjects are appealing to interests many of which demand drawing of some sort for their expression and practical realization. In geography and history, shapes of countries, types of mountains, means of transportation and numberless other topics need for their description drawing as well as language. School and home gardens are planned by diagrams. It has become the common language of the school shop and of the household art department.

Drawing as a means of expression for this widening range of interests is rapidly supplanting the drawing of a few years ago, when frequently the only interest appealed to was that of representing appearances for their own sake. Lack of special talent in drawing, as an excuse for low grades in that subject, is coming to be regarded in the same light as is lack of special talent in mathematics and in language when elementary school attainments in those subjects are under consideration.

A survey of recent discussions regarding the purposes of drawing in elementary schools indicates that the familiar statement that drawing is a language is now being taken in its full significance. Educators are pointing out that any new medium of expression furnishes a fresh kind of experience with things studied, and starts a type of thinking that a medium of expression different in character does not stimulate. The kind of thinking exercised when a pupil describes a subject by drawing does not duplicate to any great degree that involved in description by writing. The first appears rather to supplement the second. Each lays hold of aspects which the other neglects and fails to grasp. The terms used in drawing are essentially different from those used in writing and describe things in a different way. Each has its own psychology and compels its own characteristic type of analysis and synthesis.

As an outcome of these discussions one finds that art instructors are stating with increasing clearness the function of drawing as an important and unique means of approach to subjects; a means of dealing with topics in a way which supplements that furnished by verbal language and consequently gives a kind of experience with them that is otherwise unobtainable.

The changed attitude regarding drawing and design may be broadly summarized in the following statements:

1. That the tendency is less toward trying to interest children in drawing as a subject, and more toward using drawing as an efficient and unique means of expressing and promoting whatever interests school and home and community life have awakened.

2. That instruction in design deals less with formal exercises, in arrangement, and more with problems directly and practically concerned with school and home surroundings and with industrial life. The methods of instruction are coming to include, in addition to practice in producing designs, much experience in choosing as one must choose when he makes actual purchases.

Although an examination of recent courses and of the reports of conferences on the subject of art instruction gives abundant evidence that courses are being reorganized upon the same basis as other subjects, and are being graded so that there is definite progress from year to year and that the expected results are within the attainment of the majority of children, and also that the psychology of drawing and of art appreciation is being investigated by educators, nevertheless such a survey of courses and of reports of conferences discovers little in the way of attempts to state what standards of attainment may reasonably be expected in each grade and at the end of elementary school work. Indeed, expressions suggestive of hostility toward attempts to establish tests and scales of measurement of achievement in drawing are frequently evident. These objections appear to result from misunderstanding a desire to secure some system in presenting the language of art expression, as being a wish to mechanize the thought and feeling expressed thereby. Fortunately, however there is a growing recognition of the fact that systematic mastery of a means of expression means increased freedom in communicating thought and feeling.

Prof. Edward L. Thorndyke called attention to the desirability of some scale for estimating attainment in drawing, in an article published in the Teachers College Record in November, 1913, entitled "The Measurement of Achievement in Drawing." He says:

> Each person uses a scale of his own. Consequently, although we give in verbal statements and on report cards many millions of measurements of achievement in drawing every year, almost no use is made or can be made of them. A child may learn that his drawings are, in his teacher's estimation, better than those of other children in the same class who get lower "marks," but he does not know how much better they are. He may be told that his drawings are better than those of last week, but not how much better they are. As to learning from all these millions of measurements how much better drawings are obtained from 100 minutes of training per week than from 50, or how much better drawings are obtained by one city's system of instruction than by another's, or how much better drawings are obtained in the same city now than were obtained a decade ago, it is impossible.

Prof. Thorndyke then explains a scale which he worked out, describes and illustrates some of its uses, recounts the principles of its derivation, and makes clear its limitations. Further careful work in the same field is being carried on by other investigators, and additional contributions will doubtless be available soon.

The effect of the war, which has greatly influenced industrial work in elementary schools, is also evident in art instruction. Many of the problems for design have included the making of posters for food conservation, war-savings and thrift stamps, liberty loans, gardening, Red Cross and Y. M. C. A. work, etc. Other design projects have included covers for scrapbooks for soldiers, designs and decorations for toys for refugee children, and the patterns and ornamentation of various objects to be sold for war funds.

ART INSTRUCTION IN HIGH SCHOOLS.

High-school courses of the past two years indicate some significant and a few radical changes. Two influences among others have been particularly strong in bringing about these developments. One is the widespread organization of junior high-schools, which has resulted in a closer articulation of elementary and secondary schools. The other is the rapid progress of vocational education.

The organization of junior high-schools has brought into prominence many psychological as well as administrative questions. Educators especially interested in these questions have contributed, among other things, important considerations regarding some of the differences in the attitude of high-school students toward school work as compared with that of elementary school children.

One difference appears to consist in greater need on the part of pupils for some practical or intellectual justification for the work undertaken. The fact that certain studies appear in the accepted curriculum no longer appeals to the majority of the pupils as being a sufficient reason for undertaking these studies with enthusiasm. In addition the significance of the course to them and to their prospects must be understood if it is to engage their whole-hearted endeavor. New social and vocational interests are awake and must be ministered to.

Another interest which influences art instruction directly and which appears to be much stronger in high-school pupils than in those of elementary school age is the interest in the theories and principles of the subjects of study and in the historical development of things and of events. Accompanying this interest is an increased capacity for developing some genuine appreciation of artistic styles and of the different possibilities of various mediums of expression.

The progress of vocational education is recognized in the recent tendencies of art instruction in high-schools as noted by school superintendents and by instructors in art. Almost without exception the changes reported are toward a more direct and concrete application of art. The following quotations, entirely typical of the expressions found in a wide range of returns, are merely statements in different terms of this tendency:

> The primary purpose of our art is to relate it to the entire life of the children both in home and in their occupations.
>
> An effort to adapt instruction to the requirements of local industries.
>
> Tends more and more toward industrial work.
>
> Vocational art courses, art related to printing, courses in home æsthetics.
>
> Have started such work as art in window dressing with practical application in stores, * * * art in dress, * * * dress appropriate to occasions.
>
> Collection and study of good illustrations of furniture.
>
> Much emphasis recently given to having designs worked out in material. * * * Advanced courses are highly differentiated with high technical standards demanded.

In addition to this concrete tendency, there is on the other hand an increasing recognition of what are commonly called the cultural values of art study, its importance as historical material, and its significance, in common with music and literature, as an embodiment of the æsthetic experiences of the race.

The following extracts from a report by Dr. James P. Haney, director of art in the high schools of New York City, put in clear terms some of these tendencies.

This training in what may be called "practical æsthetics" has thus become a subject of keen interest on the part of many who are engaged in the business of creating materials for home or personal adornment. * * * Both "the public" and "the trade" understand more clearly with every passing year the need of this training; the public that life itself may be made more pleasurable; the trade that its standards may be raised in every aspect wherein art touches industry. The milliner, the dressmaker, and jeweler are interested on the one hand; the furniture manufacturer, the wall-paper dealer, and the textile merchant on the other. Many additional trades are concerned. * * * Now, as never before, these merchants and dozens more are asking, "What are the schools doing to make their art teaching practical?" * * *

The older barriers which separated the school studio from the industrial art studio outside the school have been breached and in some cases quite torn down. Art teachers in numbers have visited "the trade" and have brought back a course of practical suggestions to the classroom. Counter visits have been paid by merchants and manufacturers to the schools, and many have sent their trade designers to see the school work and to give to the teachers and pupils the industrial point of view. Practical problems have been worked out in material, and not a few competitions have been instituted by trade representatives that pupils might see how immediately useful in business is the information gained in the school. * * *

Every one must patronize the industrial artist, for all must have chairs and tables, dishes to eat from, and clothes to wear, and emphasis has been placed on the professional nature of the work of the school that the student might be made keener to scrutinize the professional hand which he sees about him at every turn. * * *

Many thousands of pupils are thus reached every year and are encouraged to visit the museum frequently to enjoy not only the pictures and sculpture, but the splendid carvings, beautiful enamels, the glowing porcelains and the priceless tapestries. Thus they are given what may be called "museum habit." They are taught not only where to look but how to look and are given something at least of the satisfaction of "the knowing one," the connoisseur whose affection is drawn by insight into the beauties of the craft which are displayed in jeweled cup or damascened armor. This interpretation of the museum to the school pupil, this revelation of what pleasure may be had in this scrutiny is held to be one of the functions of the art department of the city school system. It can little profit a city to have within its borders priceless collections, if these for whom the collections are shown see its beauties as through a glass darkly.
* * *

This training, it is manifest, is not to be given by talking about it, but rather by continually offering to the learner problems in which choice must be expressed in terms of immediate need. Shall one, for example, in designing a flower bowl, turn the curve thus, or shall it be so? The decision as to which line best expresses the quality of the clay and the purpose for which the bowl is shaped is the decision which makes for taste. Taste in other words is a discriminative judgment born of many opportunities for choice. Some grow in taste rapidly, some slowly, but the process is always the same. One must learn to choose and to choose by virtue of the knowledge of what makes for better line or color or pattern. Taste is thus not a thing of definite standards. It is rather an intellectual quality. It is a habit of mind which seeks always to compare the better with the poorer and which strives continually to sharpen its own perceptions that it may judge more truly. It has a critical function but a constructive one which aims not only to see that the thing is better but aims *to know* why it is better. * * *

The merchant who is a bad designer will seldom be cured by admonition. The only way to cure him is to catch him while he is still a lad at school. But granted, on the other hand, that such practical teaching can be given—and it surely can—it must be plain that there resides in the teaching of the schools enormous force to affect the art ideas of the public for the better. This force undoubtedly is at work. No one who knew the American home and its decorations as it stood in the early seventies and now sees the home of the persons of equal social standing will doubt for a moment that great progress has been made. It is a change which has taken place all over the country, but most significantly where the art teaching of the schools has been active. Something of this idea that everyone is an artist in his own right has dawned upon thousands of men and women. * * *

But with the development of that which we have called the modern art teaching there has been a great change in the attitude of the school toward talented pupils—that little group which we have called "the few." It has been plainly seen that it is to the advantage of the school to hold those gifted boys and girls within the character-shaping boundaries of its walls. On the other hand, it has been seen that it is to the pupils' interest to stay rather than to leave half trained in all that makes for general culture and to plunge at too early an age into the ceaseless grind of business life. For these reasons the modern high school seeks to retain the talented pupil through its entire course. Instead of fitting the pupil to the course, it now devises special courses to fit the pupil. It recognizes that talent is precious, and when it finds it, does all it can to cultivate the gifted and to school them to high technical experience.

Certain difficulties are evident in the organization of high-school courses in art, especially in the case of small schools.

1. There are seldom any accepted standards of attainment in art instruction in elementary schools which can serve as a dependable basis upon which high-school courses may be planned.

2. A large number of high-school instructors have been accustomed only to art school ways of teaching drawing and design. These studio methods are generally adapted only to those who possess special aptitudes for drawing. This difficulty is being remedied because cities and towns in increasing numbers are requiring that the instructor in art shall have some normal training, including general principles of education and practice teaching under skilled supervision.

3. Except in the larger high schools, where a number of classes exist, it is difficult to arrange a course which offers progress from year to year, because frequently pupils from each year in high school may register in a given class. For example, an introductory class in drawing may be made up of pupils from the first, second, third, and fourth year groups. Under these circumstances difficulty is found in relating art instruction to other school interests and to varying degrees of maturity with any sort of definiteness. This condition tends to encourage the treatment of art as a special subject. The increased amount and better organization of vocational and industrial courses is improving this situation rapidly and definitely.

4. In the past the amount of credit allowed in art toward graduation and for entrance to higher institutions was often small. Consequently, registration for art instruction was likely to be limited to those who had very strong natural desires in that direction and those who had leisure for extra courses. This hindrance is rapidly disappearing. High schools are tending to give the same credit toward graduation for art subjects as for any others in the curriculum. To a corresponding degree, higher institutions have become liberal in the number of units in the arts allowed for entrance requirements.

In addition to these obstacles, which are largely administrative in character, courses planned to realize the æsthetic values of what are commonly termed the fine arts encounter another difficulty which lies in the nature of the subject. In 1915 Dr. C. H. Judd pointed this out clearly. The following extracts are the first and the last paragraphs of his discussion:[1]

> The fine arts, like the manual and industrial arts, have stood apart from the conventional academic subjects and have been given only a half-hearted recognition in the organization of school programs. From one point of view this is difficult to understand, for civilized nations have always regarded training in music and drawing as highly desirable accomplishments. We in America have been subjected to criticism by foreign visitors and we have freely criticized ourselves for our meager cultivation of the fine arts in our schools. While thus recognizing the arts as desirable, we have found it a very difficult problem to make them available for school purposes. How can one formulate a course in these subjects? They seem to be highly individualistic and vague in their results. There seems to be so large an element of chance in the outcome that we turn by preference to those courses of instruction which seem to be more definite and capable of impersonal formulation. * * * Whatever the method of instruction, art teachers must give up the practice of indulging in rhapsodies over art and its value, and must learn to define the types of appreciation which they wish to cultivate. They must show that they know when they have produced one of these approved types of appreciation. Finally, they must by practical demonstration convince the world that there is no fundamental opposition between the habits of mind and action cultivated in the arts and those cultivated in the scientific courses given in the schools. The present-day conditions are a challenge to art teachers and to all of us. Vaguely we all believe in art; practically we are not able to bring it into the schools in any form which we regard as satisfactory for the training of students. To bring it forcibly into the course without heeding the objections raised will be unfortunate. To omit it altogether is to deprive the student of one important aspect of civilization. The challenge to deal with this situation intelligently is peremptory.

The much closer relation which has recently been established between art courses and industrial and vocational education has gone far toward defining the type of appreciation and of technical ability which art courses thus related aim to develop. This result has not only determined the aims and justified for both pupils and instructors e place of these art courses which accompany industrial work, but has also led to a scrutiny of the aims of courses not so related. In nsequence, these courses, in revised form, have received new justifi- tion.

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[1] From the Psychology of High School Subjects, pp. 345 and 364.

The revision of these so-called fine-arts courses has been mainly in e line of a better presentation of the unique historical material hich the field of art possesses, of a development of appreciation of e fine arts as a source of æsthetic enjoyment, and of the discovery ıd conservation of special artistic talent as a social asset.

Under present conditions high-school art courses may be broadly ıssified as follows:

1. Courses in drawing and design which are organically related to dustrial and constructive work, including household art.
2. General art courses, which correspond somewhat to traditional t-school courses and which appeal particularly to pupils with ecial art interests.
3. Courses consisting of illustrated lectures, readings, and class citations which present a survey of art.

The character of these three types of courses is indicated more in tail as follows:

1. High-school courses in drawing and design are coming to be ore and more closely correlated with industrial and constructive ork. Formerly this correlation was expected to result from a esentation in the art classes of general principles of drawing and sign and an application of these later to the specific problems of opwork, printing, household art, etc.

The relation is rapidly becoming more organic. The problems of e drawing and design classes are now largely the actual current oblems of the industrial and vocational classes. In many cases e pupils spend alternate periods in the shop and the art class- om, dealing with the same problems in both classes. Sometimes e industrial departments take over much of the art instruction aling with their projects. Working drawing, appearance drawing, ıd design have become intimately related.

A common use of drawing closely related to home planning and terior decoration is illustrated by this extract from the course in t and industrial training of the Binghamton (N. Y.) schools:

TOPICS FOR DISCUSSION AND ILLUSTRATION.

1. Building site: Location, exposure, drainage, water supply, fertility of l, etc. 2. Building materials: Wood, brick, cement, etc. 3. Freehand sketch plan of home kitchen, for class discussion of conveniences and necessities in ıll openings and furniture. 4. Study of mounted illustrations of plans of chen, pantry, and dining room, to scale. 5. Drawing to scale, with custom- y conventions, of kitchen, pantry, and dining room, showing plan and eleva- n. 6. Freehand or instrumental sketch showing the possible remodeling of

the home kitchen to secure greater convenience or better lighting and ventilation. 7. Study various styles of door and window openings, from the view point of convenience, beauty, and expense. 8. Floor coverings: Material, color, and wood finish. 9. Wall finish: Paint, paper, and color scheme. 10. Necessary and convenient furniture for kitchen.

The present tendency to articulate the teaching of design with shopwork is described in this extract from the course of study of the West Hoboken (N. J.) schools:

> We must deal with design, whether we will or not. Every hour calls for us to settle some problem in design, some arrangement of form, some disposition of lines and masses, some choice and disposition of colors. Man's whole life is a series of designs. The relation is wide, the laws are widespread.
>
> Pure or abstract design is not a science. It has one decided lack, it fails to give the constructive view of design. There must first be a problem of construction, and second one of decoration wherein we consider balance, rhythm, harmony, etc.
>
> The function of applied design is to add interest to construction. Therefore applied design is conditioned first by structure, second by use or purpose of the thing decorated, third by the convention required, fourth by the symbolic element that may be introduced, and fifth by the personality of the draftsman.
>
> In this course of instruction we endeavor to plan the work so that the conditions set forth in the preceding paragraphs govern the subject matter.

The following recommendations regarding the general scope of high-school industrial drawing in connection with shopwork has received the approval of the faculty of the soldier training department of the University of Chicago, and also of that section of the committee of the high-school conference of the University of Illinois which has in charge the revision of high-school courses in drawing.

HIGH-SCHOOL INDUSTRIAL DRAWING AND DESIGN.

I. Freehand drawing of appearances to describe construction.
  1. Sketches directly from objects to show the appearance in perspective.
  2. Sketches for the purpose of experimenting with and perfecting ideas of construction and design.

  To do this two things are required:
    (a) Ability to judge proportions and angles rapidly and with fair accuracy.
    (b) Mastery of a few basic constructive forms so that these can be drawn in any specified position or modification or combination from imagination.

Since a rectangular, a cylindrical, and a hemispherical solid are basic to most forms of construction, the drawing of these from imagination according to specifications should be thoroughly mastered.

Tests indicate that theories of perspective, including principles of convergence, and foreshortening are not the best way of introducing the study of these forms. The most rapid and effective progress appeared to depend upon developing the pupil's ability to judge as to whether the drawings appear geometrically consistent or distorted (that is, as to whether they look right or not), rather than upon the knowledge of formulated principles of perspective. It should be noted that this method differs radically from the old-time teaching of geometrical type forms by principles of perspective.

(c) Knowledge of an effective method of procedure in drawing constructed objects, i. e., what lines are the basis of the form and determine the length and direction of the others. For example, in a rectangular solid standing on a horizontal plane, to draw one vertical edge, preferably the nearest, determines the scale of the drawing. To draw one main edge extending to the right and one to the left, so as to show their apparent slants and lengths, determines the proportions and apparent position of the whole object. These are the key lines and by them are determined the direction and proportion of most of the other lines, even if the form is considerably complicated.

C. Drawing of plans and patterns to describe construction.

1. Freehand sketches of patterns and orthographic projections directly from objects to record constructive data.
2. Freehand sketches of patterns and orthographic projections for the purpose of experimenting with and perfecting ideas of construction and of design.

To do these requires two things:

(a) Ability to read orthographic projections rapidly and to translate facts of appearance and structure into the shop conventions of working drawing, with complete dimensioning according to shop practices. In other words, given an actual piece of construction, to make sketches in orthographic projection which shall include all data necessary for constructing the object.

For all practical purposes it is necessary to understand projection only in the third angle. An introductory discussion of all four angles is generally confusing.

(b) Ability to put one's own ideas of a piece of construction first into freehand working drawings with complete specifications, and then into accurate instrumental drawings.

Most copying of instrumental work should be eliminated. Only a very limited amount is valuable to give standards of technique.

Much detailed instrumental drawing should be avoided. Freehand working drawings and appearance sketching are the chief channels of constructive thinking. The finished instrumental drawings hold somewhat the same relation to these that the stenographer's copy does to the author's manuscript. Much instrumental drawing tends to substitute manual dexterity for constructive thinking.

(c) Ability to sketch the appearance of an object from the working drawing. This is particularly valuable in enabling pupils completely to visualize and understand structures when only the working drawing is given. It requires much of the same sort of constructive thinking that is employed when objects are actually constructed from working drawings.

In both appearance sketching and orthographic drawing, speed as well as accuracy should be cultivated.

III. Constructive and decorative design.

1. Choice of materials and processes best suited to meet the specifications.
2. Choice of styles of construction and decoration most appropriate to the piece of work in hand.

These require:

(*a*) Acquaintance with a reasonable range of materials and processes, and some knowledge of the history of industries more or less closely related to the immediate project. This calls for class discussions, visits to industrial plants or other places where constructive work of the sort under consideration is going on, and assigned reading planned to open up an industrial and historical outlook.

(*b*) Study of artistic styles of construction and decoration and the adaptation of these to the problem in hand. In any particular instance, as for example in furniture, this involves some study of the history and development of styles and a knowledge from books and museums, of the best that the past has produced, and also a practical acquaintance with modern products and current fashions as displayed in trade literature and advertisements and in stores.

Appreciation and discrimination are developed by selecting and by classifying examples according to various styles and also according to degrees of excellence in things of the same general styles. Notebook collections of sketches and of illustrations from advertisements, trade journals, etc., are practical helps. After the characteristics of a style have been given it is helpful to select, classify, and discuss examples accordingly.

(*c*) Supplementary practice in making good space arrangements and in drawing with facility a few typical curves; for example, arcs of circles, ellipses, and spirals of varying degrees of curvature.

Pupils should be trained to self-reliance in analyzing a problem so as to outline effective methods of going to work, and to decide along what lines investigation or reference material will be helpful.

2. General art courses. These courses are usually planned to train ability in representation along two lines. One of these is descriptive drawing, to enable pupils to meet readily the ordinary demands for illustration in connection with any school or home interest not reached by drawing in connection with the industrial arts. Sketches and drawings in connection with history, geography, literature, and the natural sciences are examples of this sort of drawing.

The use of drawing as a means of illustration of other high-school subjects has recently received careful attention. It has been found that pupils can be taught methods of procedure in illustrating a theme, which will make their drawing a genuine piece of study in selecting the particular aspects essential to the points to be described, in choosing the medium, hard or soft pencil, pen and ink, water color, or colored crayon, or whatever other medium is best fitted to give the characteristic effect, in consulting sources of reference, material, and in gradually elaborating sketches which are at first usually crude and inaccurate, but which are gradually perfected through many experiments and the accumulation of skill and of data.

By working up pictorial themes in this way, pupils gain by experience some appreciation of the manner in which pictures develop. They learn that a work of art, however spontaneous in appearance, is usually the culmination of a long series of sketches, observations, and experiments. This experience contributes to the understanding of art, something comparable to what the production of themes in English is expected to add to one's appreciation of literary methods.

It has been shown that certain methods of drawing may promote keen observation and analysis, while other methods may actually hinder these mental processes. In a study of drawing in relation to its use in science laboratories, Prof. F. C. Ayer, of the University of the State of Washington, says:[1]

> Representative drawing does not insure a consideration of the scientific aspects, or an analytical study of an object. The preconceived purpose of reproducing a visual copy narrows the scope of observation, and the attention, at best, is directed to items of form and color. There is nothing to call up associations which have to do with scientific ends. The attention is, in fact, kept away from the associations that have to do with science as such. Even in the province of form, sustained attention is not necessary. The pupil's drawing is always subject to direct comparison with the object at hand, so that extended study and reflection over its proportions are not necessary. It is a waste of time for the interests of scientific thinking to require pupils to spend extended periods of time at representative drawing. In fact, it is worse than a waste of time, for it encourages bad habits of analytical study, which are opposed to interests of scientific thinking and constructive research. It is no wonder that so few of our picture-laden notebooks give evidence of scientific grasp or initiative. The excessive use of representative drawing is a serious pedagogical formalism which produces copyists instead of scientists and which creates distaste instead of enthusiasm for science.

After analyzing descriptive drawing in a similar fashion, Prof. Ayer says of analytical drawing:

> The preconceived purpose of analytical drawing supplies the direction of attention which is lacking in spontaneous description. The attention is directed to the particular characteristics of the object which are of immediate scientific concern. The successful type, schematic, or diagrammatic drawing can not be made without analytical study. The student who attempts to make a diagrammatic drawing * * * has before him a definite problem in analysis which necessitates sustained mental effort to the end of the process of representation.

A second purpose of these general art courses is to meet the need of pupils with special art interests. This group of pupils includes those to whom the practice of art is a continual source of pleasure of a high sort. They may never make art a profession, but it will always be to them a means of discovering new interests and enjoyments. It includes also those talented few who will make art in some form their life work. For these pupils the courses are vocational in character and help to discover and guide their ability into the lines for which they are best adapted. These are the pupils who become industrial designers, painters, sculptors, illustrators, architects, etc.

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[1] The Psychology of Drawing, F. C. Ayer, pp. 163–165.

3. The courses in the history and appreciation of art. Courses of this sort are becoming fairly common in high schools. They give acquaintance with the salient characteristics of styles of architecture, painting, sculpture, and industrial design, of the chief historic periods of art. They also bring to the attention of pupils the more important masterpieces of these periods. In such general surveys it is of course impossible to make an exhaustive study of any one topic. Nevertheless, the general features of the arts of different times which express most intimately the life and artistic ideals of the peoples can be shown. The pupils become acquainted with many of the greatest masterpieces in a way which gives new meanings to history, literature, and current events. Modern art gains added significance when viewed in the light of a knowledge of past art, and modern life is interpreted from another point of view when the arts of the present are recognized as being its inevitable expression.

The effect of war conditions upon high-school art has been evident, especially in its influence upon the subjects chosen for design. For instance, war posters have been produced all over the country. Another and more general effect has been the quality of directness and concentration that has come into work connected with the war. There is in it all an element of emergency which tends to eliminate steps of doubtful value and to produce desired effects with the greatest economy of time and means. For example, in the drawing connected with constructive work in classes of enlisted men, it has been found possible to give in a much shorter time than has previously been considered necessary, a working knowledge of the subject. A considerable part of the teaching in these classes is being done by high-school instructors, and the facts brought to light will inevitably affect their regular teaching. The Instruction Manuals issued by the War Department committee on education and special training contain many stimulating suggestions which will doubtless influence all the teaching of the instructors who use them. The following sentences from Instruction Manual No. 1 indicate the spirit of directness which dominates them:

> Methods of instruction must be used which in the time available will best train men to do these jobs. * * *
>
> *In* order to provide for the development of originality, initiative, and real thinking power and also to prevent a rule-of-thumb method, the teaching should

be almost entirely through jobs, questions, problems, and guided discussion about the work * * *

The accomplishment of a job is both the end to be attained and the means for instruction.

Another incidental effect of the war upon high-school instruction has been the widespread discussion of art values that has been occasioned by the destruction of so much of fine art that can not be replaced.

ART INSTRUCTION IN UNIVERSITIES.

Courses in art instruction in colleges and universities may be broadly classified as follows:

(1) Courses in history of art.
(2) Courses involving studio work related as laboratory work to academic courses, and dependent for credit upon association with these courses.
(3) Studio work credited independently.

The trend of recent development in these groups of courses has been as follows:

1. Courses in history of art. Historical and archæological researches have steadily increased the range and value of the material for these courses, especially in the fields of Egyptian, Cretan, Chinese, and primitive American art. Very large additions to the number of original examples of art available for study in this country have been made during the past 10 years. There is pretty general recognition now of the fact that art supplements literary documents in a special way, because it not only furnishes material in additional quantity, but its records are peculiarly different in kind. The arts of form with their vocabulary of visible shapes and colors can embody and preserve certain significant human interests which literature, from the nature of the indirect terms which it uses, can not express in quite the same way. These records of art are intimate and illuminating in a unique sense, because in many cases the student has before him the actual forms and surfaces which the artists and craftsmen produced. For this reason original art material is peculiarly confidential in transmitting, in addition to the actual subject matter, an element akin to what inflections and gesture add to words.

In addition to a wider range of historical material, the courses offered show an increase in the time devoted to modern art. The historical value of the records which art has left has always been recognized. The fact that the art of to-day is an equally illuminating factor in interpreting certain important aspects of the present has not been as generally evident. Moreover, the æsthetic standards of historic art have been comparatively well established, so that instructors can feel fairly safe in expressing their appreciation without hesitation. On the other hand, the higher type of critical judgment and æsthetic appreciation required to discern the tendencies toward significant expression and the germs of future perfection in the art of to-day have frequently made instructors diffident about dealing with this complex subject. An increased willingness to attempt it is, however, observable.

The following comments on the study of modern art are extracts from a paper by Prof. George B. Zug, of Dartmouth College:

> A professor of Greek once said to me that he thought most people are really interested only in contemporary literature. I am inclined to think that with most people an interest in art begins with an interest in contemporary art. Accordingly, in some of my smaller exhibitions I have interested the boys in the art of Daumier, by means of drawings of Boardman Robinson. From Daumier they were easily led to Delacroix, and the latter prepared for a study of Michael Angelo. In the same way, drawings of the cartoonist Cesare have been the means of opening up the subject of pictorial satire, and this has led to Daumier, to Goya, and to Hogarth.
>
> Students are interested in the mechanics of art. They enjoy seeing the tools and studying the processes used in the making of etchings, engravings, lithographs, and other prints. Colleges could attract more students to the subject of art by means of exhibitions of the materials and tools and stages in production of various kinds of prints, such as those in the New York Public Library on "How Etchings Are Made," "How Lithographs Are Made," "How Mezzotints Are Made," "The Making of a Wood Engraving," or "The Making of a Japanese Wood Block-Print." Few professors would want all of these exhibitions, and perhaps none of us could secure material and prints for such complete displays as Mr. Weitenkampf has arranged.
>
> But modest exhibitions on one or two of these lines would arouse a new interest among the students and would cost a comparatively small sum. At least one such exhibition should be part of a permanent collection of every college art department.

Regarding an exhibition of paintings, etchings, and illustrations, he says:

> The latter were chosen not in order to represent any special illustrators, but to present selected examples of high quality of work in black and white, of oil in full color, water color, charcoal, pen and ink, pencil, and etching. Considerable interest was aroused in the class by assigning a paper which should compare and contrast the use of illustration in Harper's, Scribner's, and the Century, and the use of illustration in the cheaper magazines, such as the Cosmopolitan and the Metropolitan. The best of the essays on this subject, which showed decided originality, was entitled "The Big Three and the Proletariat." The advantage of this theme was that it lent a vital interest to the subject in that it had to do with the interpretation of contemporary life and especially that the work was based on the observation of originals and of the relation of their reproductions to the text. It was a subject, therefore, which could not be cribbed from books or articles.
>
> Some of the best essays by undergraduates were published in the Boston Transcript and the Springfield Republican. The chief aim of a course in fine arts is not to furnish copy for metropolitan newspapers. It is to enhance the

appreciation of art. The point is not only that these undergraduate essays were good enough to be accepted by newspaper editors, but also that they were the result of personal appreciation, of first-hand observation.

In regard to the uses to which college exhibitions are turned, I wish to speak first of what the instructor can give the students by means of lectures, personal explanations, and gallery tours; and second, what the student can himself gain from such exhibitions.

The teacher has an opportunity to show such qualities and characteristics as do not appear adequately in any reproduction. For painting he can explain and actually show such things as tone, brushwork, harmony of color, and other qualities for different periods, and different groups within the same period. For instance, the handling of color and tone of impressionist pictures, of tonalist pictures, and post-impressionist pictures. For sculpture, of course, there are qualities of color, modeling, and patina which can be appreciated only in originals.

The direct appeal of originals is one explanation of the success of well-selected art shows among undergraduates. Moreover, exhibitions make the student body feel as they never have the importance of the study of fine arts. The feeling of proprietorship of personal interest is encouraged by having the undergraduates perform actual work, which brings its own reward in experience and appreciation. Students get valuable experience in the kind of manual labor done in museums; they unpack, hang, and repack paintings and sculpture; they make pedestals for sculpture, design labels and posters; they gain some knowledge of the problems of framing, hanging, and installation. A few also learn something of the business side of exhibitions, where and how to borrow pictures, selection of works of art for exhibition purposes, and matters of insurance.

Undergraduate correspondents have reported the exhibitions for city papers and for college publications. They have also shown competitive interest in writing essays for small money prizes. But perhaps one of the most happy results of the exhibitions has been their use by other departments. The professors of psychology and of English composition have required themes based on direct observation of the originals. Accordingly, over 500 students in three departments had required exercises based on the works of art in one exhibition.

2. Courses involving actual practice in drawing, painting, modeling, and designing and directly related, as laboratory work to academic courses. The character of these courses is naturally determined by the particular departments to which they minister. Prominent among the departments under whose auspices courses of this type are organized are those of history of art, education, architecture, and engineering.

The following quotations from a paper by Miss Edith R. Abbott, of the Metropolitan Art Museum of New York, indicate the character of many of these courses, organized in connection with courses in history of art:

> In discussing this question, I have assumed that the term nontechnical laboratory work may properly be applied to laboratory drawing in which the object has been to develop the power of observation, not to achieve technical proficiency. Prof. Moore, of Mount Holyoke, says, "The term 'laboratory work,' borrowed from the sciences, is not a misnomer here. In science the laboratory forms *the basis of theory; facts* are observed, and by inductive and deductive

reasoning general principles are from them affirmed. In a study of historical art, too, laboratory work is used as a method of close analysis. Such work should be not merely an accompaniment, but an organic part of the study of the history of art. Our purpose in its use is to enable the student to devote his attention for a time to one or another feature of a picture; * * * the student tries, by drawing or modeling, to copy or suggest these points, and in so trying he is obliged to analyze them with a peculiar concentration that he would hardly attain by any other method." * * *

The study of this form of expression, I believe, should not differ essentially from that of music or literature. The work itself must speak directly to the observer without any intermediary. The art student should be encouraged to make his own investigations and to draw his independent conclusions from analysis of the masterpiece itself. He may examine the structure of the picture in the same way that he would examine the structure of a symphony; he may look for the idioms of the painter or draftsman and learn to recognize them as he would recognize the terms of speech which characterize the style of a great writer.

In any such analysis, I believe the use of drawing to be invaluable. With the student and beginner, drawing has the important advantage of holding the attention focused upon the object for an appreciable time.

Let us consider the advantage of laboratory drawing in the study of composition. Compositions might be called the study of the interrelation of the parts. Baldwin Brown says, "The temptation to consider the parts in themselves rather than the effect of the parts in their relation to the whole is to most people irresistible." The untrained eye finds the plan of composition difficult to decipher, and yet the artist has based his arrangement upon a carefully constructed scheme. Mr. Cox thought it worth while in his analysis of Veronese to draw a diagram in order to demonstrate the severe laws of balance upon which Veronese relied for his effects. It seems beyond question that the picture has a greater interest when this fundamental structure is understood, since it gives the clue to the whole complex scheme.

A similar analysis may be made a class exercise, the students being required to sketch from lantern slides the structure lines of simple compositions. A time limit of 5 or 10 minutes may be set, or the student may be left in uncertainty when the light will be extinguished. By this means they learn to think logically and to build up the "anatomy" of the picture in an organic fashion. Whatever may be the results on paper, the exercise necessitates concentration upon structure and upon logical development. College teachers of English have told me that the clear analysis shown in these drawings was exactly what they were trying to get in their work in English composition. Laboratory drawing holds the attention concentrated upon form rather than upon any extraneous interest or associated idea. It facilitates the understanding of compositional problems with all the delicate adjustment of forms to space which they involve. A more intimate acquaintance is gained with the expressive language of art, and the foundation is laid for the appreciation of "quality," so that in the final analysis one should be able not only to distinguish the line of this or that painter, but also *la ligne vivante* which characterizes great art. Laboratory work is essentially a means to an end. For the student with artistic ability it can never become a substitute for real studio practice. But once initiated into this new world in which the senses play so large a part, the student experiences keen enjoyment.

3. Studio courses not planned primarily as laboratory work for academic courses.

There is an evident tendency to credit work in art which is more or s independent of an organic relation to academic courses, but ich is nevertheless considered as an appropriate part of a major art. In some cases these courses are carried on in an accredited school. The affiliation between Brown University and the Rhode and School of Design is an instance of this type of arrangement. ny colleges and universities have their own department of fine art. e steadily increasing amount of recognition accorded to well- ganized studio courses in art as appropriate for academic credit is rtly the result of a realization that art expression is more than a tter of manual dexterity in making a record of what one sees. It olves in addition, the translation of one's impressions into terms expression which have been slowly evolved by the race, and which nand careful analysis and selection, and the knowledge of a body principles and recorded experience. In the same sense that the t of excellence of themes in English is not their exactness as dic- raphic records of actual conversations nor as literal statistics of servations, so the test of college art work is not its correctness a record of forms and colors, but its reconstruction of the raw ma- ial of visual sensation into artistic expression.

The recent steady increase in the number and size of departments fine art in universities is destined to exercise an important in- ence upon American art in two directions; namely, by giving to future citizens who will be the patrons of art and the promoters the standards of civic beauty an early acquaintance with artistic erests and ideals of excellence, and also by offering to those who ar will be professional artists an opportunity to continue through lege the contact with art which in many cases was begun in high ool.

Notwithstanding the high degree of skill in handling materials ich drawing, painting, modeling, and designing involve, they are their higher forms allied to the arts of expression more closely n to the arts of construction. In universities where art may be ected as a major subject, the student who plans to use art as his m of expression has the same opportunity as the student who in- ds to enter the profession of literature, to begin his work under ditions which will give him a broad intellectual background and nulating contact with other vigorous interests.

The artistically gifted student in a college or university which has art department generally finds, early in his course, that he must ose, in a manner that the student who plans to make science or rature his profession is not called upon to do, between a college rse and a highly specialized art course. Too early technical ility, unaccompanied by constantly enlarging intellectual outlook is as bad for the art student as too late a knowledge of the use of his means of expression.

The organization of college art courses is steadily improving. The work of the College Art Association of America is contributing effectively to this end.

ART MUSEUMS AND ART SCHOOLS.

Art museums have always been a most important factor in art education in America, and their influence is extending rapidly. This development is due in part to the increase in number of museums and in the size and quality of their collections, and in part to improved means of making their collections available. Most modern museums have established close relations with the communities in which they exist, and have put forth every effort to make their collections of use as a stimulus and guide to the art student and industrial worker and as a means of artistic pleasure and inspiration to the general public.

The older museums have existed long enough to be able to weed out much ordinary, but space-filling and mind-confusing, material. The newer museums learned by the experience of older institutions to protect themselves tactfully from mediocre but generously offered material, so that a satisfyingly large proportion of the works exhibited in the permanent collections of the museums of to-day have a genuine artistic significance.

Where means are limited, it is generally considered more important, in extending the list of permanent acquisitions, to have a small collection of a high degree of excellence than one which is large but only fairly good. It has become customary to regard a sum of money as more wisely expended in the purchase of one or two excellent examples of a given style or period of art than in procuring many ordinary illustrations of a wider range of styles. Photographs, and in some cases casts, are generally regarded as better substitutes for unobtainable fine things than original productions of indifferent merit. In consequence of this policy, the number of commonplace productions on permanent exhibition in American museums is relatively small.

Besides the regular displays of collections owned by the institution, nearly every museum has a succession of exhibitions of works of special interest, including current productions of pictorial and industrial art. Societies now exist for the promotion of American art, and their patronage in the form of prizes and purchases is an added influence in bringing to these exhibitions much of the best in modern American painting, sculpture, and design. While the collections accumulated from current exhibitions by these associations doubtless contain many things that will not stand the test of time, nevertheless fter a hundred years the really excellent material they contain romises more than to justify the policy, without taking into account e encouragement that has been given to American art during that me.

Besides making art productions of the past and present available, useums are organizing further educational activities with increasing fectiveness. In the galleries, docents and guides are available; terature, lantern slides, photographs, and color prints of good uality are provided; and lecture courses and classes are organized. any museums have their collections of lantern slides selected and rranged so as to be of use in the community, especially in the hools. Carefully prepared lectures in manuscript form, together ith appropriate slides, are frequently available for the use of hools. A few museums have collections of slides which, for a small ental fee to cover packing, will be sent to various parts of the ountry. The Metropolitan Museum of New York and the Art Institute of Chicago are notable among the institutions which offer this ide opportunity. The bulletins published periodically by many useums have become important art documents. By them the acqui-tions and opportunities of these institutions are made known to e public.

The educational activities of museums and special art schools iffer considerably, because each is experimenting with methods of eeting the needs of its locality. Reference can be made here to nly a few, but the following are fairly typical of the various lines f effort.

Some of the lectures and classes announced in the bulletin of the etropolitan Museum of Art in New York City, September, 1917, re the following:

For the public, Sunday afternoon lectures, illustrated and followed by visits the galleries through the winter season.

Story hours for children and adults, illustrated and followed by visits to e galleries.

Artistic problems in Greek sculpture; five illustrated lectures.

For students of sculpture and painting in the art schools of New York. Four nformal talks by painters and sculptors, with illustrations.

For teachers in the public schools of New York City. Gallery talks by the useum instructors.

For elementary and high school pupils. Four lectures in cooperation with he American Museum of Natural History. Textile industries of the United tates. The garment makers of primitive times. Historic fabrics and cos-umes.

For sales people, buyers, and designers, three seminars.

For the deaf. Four illustrated lectures for those who can read the lips.

For the blind. Three talks for children, illustrated with objects from the ollection which may be handled.

The Art Museum of Worcester, Mass., has set an admirable example in the activities of its children's department, the informal work in drawing, the Saturday story hour, and the gallery visiting.

> Inevitably, the most important results of this work can not be measured in figures; they are observed by those who know the children as individuals, in the increased capacity for spontaneous enjoyment of beauty wherever seen, and the deeper interest in the museum, leading even to a certain sense of part ownership in the collections which, through intimate association, have come to mean much to these "younger citizens."

A large number of museums carry on systematic work in direct connection with the public schools and offer to teachers and pupils free admission to the galleries. The plans followed by the Museum of Fine Arts in Boston, the John Herron Art Institute in Indianapolis, the Carnegie Institute at Pittsburgh, and the Cincinnati Museum Association are typical of these activities.

The Museum of Fine Arts in Boston, among numerous other opportunities which it furnishes, has established in another section of the city a Children's Art Center. Here children may see loan exhibitions and be helped in the study of them and guided in their own efforts to draw.

Some 18,000 persons annually take advantage of the opportunity for free admission offered to school children and teachers by the John Herron Art Institute, of Indianapolis. It maintains a series of illustrated talks for grade-school children on popular subjects closely allied to art study. For high-school students a two-year lecture course is given on the history of art (one term each covering painting, architecture, sculpture, and the decorative arts), a full high-school credit being awarded to each student attending through the two years. A course in "museum study," planned to develop a fuller knowledge of museum material and a better understanding of how to make use of it, is a required part of the Indianapolis Normal School curriculum. In addition to these regular courses, all given at the museum, numerous classes come for special study or for a general museum visit, and frequent lectures are given in the various school buildings on the practical application of art in the home, the city, the community, and along similar directly helpful lines. In the art school which it maintains for professional training in drawing, painting, and the decorative arts, classes are conducted for teachers at special low prices and free classes for elementary and high-school pupils. In addition it offers scholarships for advanced work in art to pupils who show special ability. Recently, the free scholarship has been extended to cover the whole State of Indiana and a scholarship offered for each of the 92 counties in the State.

The Cincinnati Museum announced its plan in its report for 1909 as follows:

The question of education on a large scale—that is, of bringing the general public into intelligent and agreeable acquaintance with objects of art—is a matter which is occupying the attention of every museum at the present time. It is being variously dealt with. There is, of course, no difficulty in answering he needs of an individual or of a small group who come with a definite question or a common want. It is a pleasant and profitable task, for example, to alk over the Greek sculptures with a group of children who know their mythology. But it is doubtful whether the needs of large visiting classes of school children can ever be adequately met by instruction inside a museum. Certainly to attempt locally the systematic instruction of great numbers would be an impossible tax on a small and busy staff * * *. There are times when the request for guidance must be reluctantly refused. Volunteer service of the right sort would be a great boon and would hardly run the risk of becoming stereotyped, a real danger to any employing the function too frequently. By far the best results, however, are to be gained by the school-teacher who possesses sufficient knowledge to use the collections. She can reinforce her own work by drawing on an inexhaustible fund for illustration, and by reason of her knowledge of the child's degree of preparation she need waste nothing. If she possess, in addition, a love of beauty, either native or acquired, the conditions for success could hardly be improved upon.

The museum, then, is putting its main strength along this line into its work for teachers.

Another not uncommon affiliation is illustrated by the opportunity offered at Cincinnati, where high-school students may elect an art course which is arranged to allow five afternoons of work each week n the museum academy. Each afternoon's program includes three hours of drawing and painting. Instruction in the history of art is given to these students at the museum. The museum circulates through the schools certain sets of lantern slides with a synopsis. The subjects for 1918 are: "A Review of the Museum," "The History of Painting with Special Reference to the Characteristics of the Great Periods," "Metal Work," "Design as Studied and Practiced To-day." A lecturer from the museum is sent to the schools occasionally.

The way in which the Carnegie Institute comes into touch with the school children is described as follows:

The problem presented to us by visits to our galleries of groups of children from the public schools, and the way in which we have undertaken to solve it, may be briefly stated.

Through the interested cooperation of the superintendent of schools in Pittsburgh, and the director of art instruction, and the exceptional liberality of the board of education, the students of the entire eighth grade of the public schools, numbering 5,000, and ranging in age from about 14 to 16 years, come three times during the school year, with their teachers, as part of their regular work, to visit the halls and galleries of the department of fine arts at Carnegie Institute. Each visit is limited in time to an hour and a half, and the three subjects, painting, architecture, and sculpture, are studied, but each period is devoted to the study of one subject and of only a few works of art. These works are used for the purpose of illustrating some of the fundamental qualities defined.

As a result of many years of observation the problem presents itself to me in this way. We have, on the one side, groups of interested and intelligent children, eager to see and hear and understand. They come to us from 5,000 homes scattered throughout the entire city, and the majority of them have had no opportunity to learn anything about art, or even to see works of art. They have had nothing beyond the elemental art training offered by the public schools, and their sole means of observation has been practically limited to illustrations published in books and magazines telling stories or illustrating incidents. This side of art is, of course, so obvious that it may be readily understood by a child.

On the other side of the problem, we have the entire realm of art with which to deal, in three sessions of an hour and a half each; the history of art, of painting, of architecture and sculpture; the wide field of biography, of painters, of architects and sculptors; the technical side of art, the peculiar or special methods adopted, especially by painters, in the production of their work; and the various elements or qualities which enter into a work of art. The problem might be approached from any of these angles.

It will be seen at once how futile it would be to attempt to give the young people any idea of the history of the art of painting in the space of an hour and a half. It might be possible to deal briefly with the life of a single artist within the time, but the impossibility of dealing adequately with the wide field of biography within the hour and a half is apparent. And while the technique of art is an interesting field of inquiry and study, the peculiar manner of doing a thing is unimportant. Supreme examples of art have been produced by various technical methods. Technical methods are of little more importance than the handwriting of the author. Moreover, these students do not come seeking technical knowledge. They simply want to know why this or that work is good, to the end that they may better understand and enjoy art. The folly of attempting to teach these young people the history, biography, or technique of any art in an hour and a half is evident.

Therefore, it will be readily seen that if we are to give these students anything worth bringing them to the institute for, we must select for them with discriminating judgment and concentrate their attention upon some important quality or qualities of the subject. Our chief purpose, then, is to give the student a *point of view* from which to examine and study, not one work of art, but all works of art.

The scholarship plan of the Cleveland School of Art illustrates some of the types of scholarships which art schools offer to talented public-school pupils. This school offers working scholarships and a few money scholarships. Last year the "Mutual service fund" was inaugurated. This is made up at present of eight purses of $350 each. A talented pupil can have the benefit of one of these purses on condition that as soon as his earnings begin, the money be returned without interest, in installments to be paid either by the individual or by his employer—a certain percentage of his earnings monthly—until the whole is returned for another to use. The purses are given by individuals or organizations who come into personal touch with the beneficiary. The pupils whose abilities are recognized by the award of these scholarships are usually discovered in the high schools. Application is made through some special teacher of drawing who knows the facts about the pupil and his work.

The Cleveland Museum, in addition to its regular gallery displays, has exhibitions of selected works of art in a place of honor and under special illumination, each for two weeks only. Illustrated leaflets are issued interpreting these selected works and giving references to helpful literature about them and the artists who produced them.

In connection with the difficult matter of appropriate gallery talks a much better understanding is evident regarding the ways in which genuinely artistic appreciation is promoted. Some fundamental considerations on this complex problem are set forth with admirable clearness in the bulletin of the Art Institute of Chicago for February, 1918, from which the following paragraphs are extracts:

> There is no form of art lecture capable of greater value to the interested public than that delivered in the presence of the works under discussion. Here qualities are seen and pointed out rather than described, and here the emphasis can be laid on a statement of the principle governing the manipulation of those qualities—the essential processes of art.
>
> And yet there is no situation in which the lecturer can more easily be tempted from the straight and narrow path of scientific truth than in the gallery talk where the acquiescent pictures seem so ready to corroborate any word he may utter. The exercise of individual taste and the play of individual fancy have a right to play their part in the appreciation of works of art, and something very like these often stimulates the amateur critic into strange vehemence of statement—either of denunciation or of praise—in channels of purely personal thought whose value for his audience is certainly nothing and may be less.
>
> Now this leads to the single deadly sin of the picture talker—the creation of prejudice. * * * It is precisely the function of the gallery talker to help us to find the artist's angle of vision. The greatest gift he can offer us is to make us sympathetic with the conceptions which are new to us. His best means of accomplishing this is to help us to rid ourselves of the films of prejudice through which we all are obliged to some extent to peer. * * *
>
> For we can not receive our æsthetic experience second hand. With the open-minded attitude which is ready to accept a "message" from any work, however old or however new, there must be combined an insistence upon receiving that message at first hand and for ourselves. The gallery lecturer who in any way attempts to come between us and the superlative delight of growing into the love of a work of art through our growing acquaintance with it, shows us at the start his (or her) failure to grasp the first essential of leadership in art appreciation.

Practically all modern museums carry on one or more of the kinds of educational activity here mentioned. The foregoing examples have been cited only to illustrate types of work, all the specific instances of which are fortunately much too numerous to allow of individual mention.

Art education related to industries has been prominent in America for many years. It is receiving a fresh impetus at present from the prospect that, after the war, the United States will have to depend upon its own resources more than in the past, not only for designers but also for *styles of design.* A kind of originality must be developed that can produce things which are not only new but fine in quality. With this necessity in mind, older schools have been improving their facilities, while new schools intimately related to local industries have arisen. The Grand Rapids School of Art and Industry, in Michigan, and the Federal School of Commercial Designing, in Minneapolis, are types of these newer schools. Most of the schools of industrial art offer special opportunities for school pupils whose vocational interests in this field have become evident. The scheme of affiliation worked out by the School of Industrial Art in Trenton, N. J., is typical of this sort of arrangement. Here pupils from the city schools may take courses for which the fees are merely nominal. Technical art courses are provided for pupils who have completed the junior high school, and an art teachers' course is offered for students in the normal school.

American students of textile design have only recently discovered the value to their work of the extensive collections of primitive art which are gathered in the anthropological museums of this country. These students are recognizing the fact that primitive art is often very good art and that it offers a vast source of suggestion and inspiration for designs that are original, in the sense that they are unlike those to which we have become accustomed. In an article entitled "Museum Documents and Modern Costume," in the American Museum Journal for April, 1918, Mr. M. D. C. Crawford writes:

> Above and beyond the artistic merit of these costumes, however, they illustrate in a definite manner a very important feature of the educational possibilities and public usefulness of the American Museum. Every single garment in the collection was founded on a specimen in the collection of this museum. In certain instances, the inspiration is perhaps difficult to trace, but in others it is quite obvious. These garments represent the first fruits of what I may term "creative research" by the American costume industry. The documents in the museum were studied with the view of applying ideas, either in decoration or in line, to modern costumes. Instead of the usual method of importing modern foreign costumes (themselves based, generally, on foreign museum collections), our designers, familiar with the practical needs of to-day, have gone direct to original documents for their inspiration. The work, therefore, marks one of the most important movements in the development of a truly American type of industrial art. * * *
>
> It is not difficult to understand how important a part our great museums and libraries must play in the proper industrial expression of art. They are for the artist inexhaustible mines of suggestion. The art of each people and age is an evolution from some former type. The artist, especially the decorative artist, is concerned not alone with purely original creation, but with the inspired selection of certain ideas and motives of ancient origin that may have a fresh significance for his own time and people.

The national need for industrial design is strongly influencing the art departments in high schools and art schools. In the past, many students have entered art work because of their strong liking for that work, but in only a few institutions has the training been directed and vitalized by any definite knowledge of the actual demands for the product. Consequently, many art students with marked abilities in design but not in pictorial art have received only formal training in design or have given their time to painting pictures, thinking that overcrowded field to be the only place for art expression. Many with valuable talent have turned to work other than art because they had no knowledge of the opportunities offered. Prominent among the agencies which are remedying this condition is the Art Alliance of America. This association was organized in New York City in 1914, with headquarters at 10 East Forty-seventh Street. One purpose of this association is to promote working relations between art producers and the industries. It brings artists and art students into personal touch with industries which need art products. The New York division of this association was organized in New York City in 1914. Galleries are maintained in the heart of New York's shopping district, where exhibitions, organized in close cooperation with artists and with the trades, are held every month. Positions are secured, work sold, and advice given by artists and educators. Hours are assigned daily for personal interviews and examination of work. The Central States division was organized in the fall of 1918 in Chicago, and maintains an office in the Art Institute. At each monthly luncheon the artistic possibilities of some industry are discussed. The movement has the friendly cooperation of the Illinois Manufacturers' Association, and plans for a comprehensive exposition in the fall of 1919 which will illustrate the necessity of art in industry are under way. Additional divisions are being organized in other centers in the country, so that the alliance is likely to exert a strong and direct influence upon the methods of teaching of design, and upon the vocational guidance of students of marked artistic abilities.

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AGRICULTURAL EDUCATION
1916-1918

By

C. H. LANE

FEDERAL AGENT FOR AGRICULTURAL EDUCATION, FEDERAL
BOARD FOR VOCATIONAL EDUCATION

[Advance sheets from the Biennial Survey of Education
in the United States, 1916-1918]

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AGRICULTURAL EDUCATION, 1916–1918

By C. H. LANE,

Federal Agent for Agricultural Education, Federal Board for Vocational Education.

CONTENTS.—Agriculture in secondary schools—The elementary schools—Agricultural education at meetings—Agricultural education in other countries—Educational work of the Department of Agriculture—The agricultural colleges—Appropriations—Extension and short courses—The graduate school of agriculture.

AGRICULTURE IN SECONDARY SCHOOLS.

In the passage of the Smith-Hughes Act another important step has been taken by the Federal Government in its relations to education. Under the new measure, Federal appropriations ultimately aggregating over $7,000,000 per annum have been made available for cooperation with the States in the promotion of vocational education in agriculture, the trades and industries, and home economics, including the preparation of teachers. The principle of Federal aid through the States to education in institutions of subcollegiate grade has been established, and an additional set of administrative machinery has been devised to operate the new system of education which is provided.

As a pioneer measure, the new legislation inevitably recalls the original Morrill Act. Primarily both laws were apparently intended to provide training in agriculture and the industries, the one in collegiate, the other in subcollegiate institutions. They were thus both designed to develop a type of education of the utmost importance to our country, but previously never directly supported by the Federal Government and to only a limited degree by the States and local communities. Likewise both acts involved the introduction of a new system of education into the existing system.

It is somewhat remarkable that these two measures, separated in time by a period of over half a century, should both have been enacted in a period of great national crisis. The Morrill Act of 1862 was of course signed in the midst of the Civil War, while the vocational education act of 1917 antedated by only a few weeks the formal entrance of the United States into the present conflict. The co dence is the more striking since both measures were designed to f agriculture and the industries, foremost among the arts of peace since both had been pending in Congress for years before the outl of hostilities.

The measure ultimately adopted was introduced into the S fourth Congress by Senator Hoke Smith on December 7, 1915 was passed by the Senate with amendments July 31, 1916. Its enactment was strongly urged by President Wilson in addre Congress at its reopening in the following December, as—

> of vital importance to the whole conutry because it concerns a matter to neglected, upon which the thorough industrial preparation of the count the critical years of economic development immediately ahead of us i large measure depends * * *. It contains plans which affect all in and all parts of the country, and I am sure that there is no legislatio pending before the Congress whose passage the country awaits with thoughtful approval or greater impatience to see a great and admirable set in the way of being done.

As an expression of educational policy, the new act embodies important departures from previous legislation. It makes prov for the training within the schools of a large group of our po tion hitherto unreached directly by the Federal Government. the one hand, by offering instruction along vocational lines a subcollegiate grade, it supplements the Morrill Act, the expr purpose of which is to maintain colleges "to teach such branch learning as are related to agriculture and the mechanic arts * in order to promote the liberal and practical education of the i trial classes in the several pursuits and professions of life." O other hand, since it contemplates a system of training in the scl it also supplements the agricultural extension act of 1914, in whic service provided is "the giving of instruction and practical de strations in agriculture and home economics to persons not atte or resident in State colleges in the several communities." Si imposes definite requirements as to the training of teachers, it represents a material extension of authority over the purely pe sive provisions of the Nelson amendment of 1907.

The most radical innovation in the act deals with the method administration. Previous legislation along these lines has rega the college of agriculture and mechanic arts as the State unit, wh for college instruction under the Morrill Act and acts suppleme thereto, the preparation of teachers under the Nelson amend the conducting of research in agriculture under the Hatch Adams Acts, or the carrying on in cooperation with the U States Department of Agriculture of extension work in agricu and home economics under the extension act. The administrati those measures dealing with college instruction has centered in the Department of the Interior, and of those dealing with research and extension work in agriculture in the Department of Agriculture. The vocational education act in both respects establishes a new administrative system.

As its head there is provided a Federal Board for Vocational Education. This board consists of seven members, including the Secretaries of Agriculture Commerce, and Labor, and the United States Commissioner of Education, ex officio, with three members appointed by the President and confirmed by the Senate, ultimately for terms of three years each. One of the appointed members is a representative of the manufacturing and commercial interests, one of the agricultural interests, and the third of those of labor. The board selects its own chairman each year.

The Federal board is charged with the administration of the act, the details as to the care of funds, the certifying of the States, etc., in general plan resembling the legislation for the agricultural colleges and experiment stations. In addition it is empowered to make, or have made, investigations and reports to aid the States in the establishment of vocational schools and classes, and in giving instruction in agriculture, the trades and industries, commerce and commercial pursuits, and home economics. These studies include agriculture and agricultural processes and the requirement upon agricultural workers, similar studies as regards the trades, industries, and commerce, home management, domestic science, and the study of related foods, and the principles and problems of administration of vocational schools and of courses of study and instruction in vocational subjects. In the discretion of the board, the studies concerning agriculture may be made in cooperation with or through the Department of Agriculture. Similar cooperative arrangements may be made with the Departments of Labor and Commerce for industrial subjects, while the studies of the administration of vocational schools, curricula, and methods of instruction in vocational subjects may be taken up in cooperation with or through the Bureau of Education. An appropriation of $200,000 per annum, available from the date of passage of the act, is made to the board for its expenses.

To cooperate with the Federal board in carrying out the act, each State when accepting its provisions is to designate a State board of at least three members. The State board of education or some board having charge of the administration of public education or of any kind of vocational education may be designated as the State board, or an entirely new board may be created.

The State board is to prepare plans for the approval of the Federal board, showing the details of the work for which it is expected to use the appropriations. These plans, it is specified, must show the kinds of vocational education contemplated, the kinds of schools and equipment, courses of study, methods of instruction, and the qualifications and the plans for the training of the teachers and agricultural supervisors. In all cases the work must be conducted under public supervision and control.

The plans of expenditures for salaries in agricultural subjects must in addition show that the controlling purpose of the education is to fit for useful employment, that the training is less than college grade, and that it is designed to meet the needs of persons over 14 years of age who have entered upon or who are preparing to enter upon the work of the farm or of the farm home.

The Federal appropriations to the States are divided into three distinct groups, providing respectively for the payment of salaries of teachers, supervisors, or directors of agricultural subjects; for the payment of salaries of trade, home economics, and industrial subjects; and for the preparing of teachers, supervisors, or directors of agricultural subjects, and of teachers of trade and industrial and home economics subjects.

The main initial appropriation for salaries in agricultural subjects is $500,000. This is increased by $250,000 per annum during the next six years and then by $500,000 per annum during the next two years, making an appropriation of $3,000,000 for the fiscal year 1926 and annually thereafter.

The main appropriation for preparing teachers and supervisors is likewise $500,000 for the first year, but increases to $700,000 and $900,000, respectively, for the next two years and then becomes $1,000,000 per annum thereafter. The Federal appropriations for teacher training must be divided among agricultural, trade and industrial, and home economics subjects, no one of these subjects being granted more than 60 nor less than 20 per cent of the State's allotment for that year.

The act embodies a system of Federal and State administration of vocational education which is a compromise between the views of those who thought a separate system of public education should be organized for vocational purposes and those who believed that the unity of our present public-school system should be maintained. Each State is left free to establish a separate system or to make the vocational schools and courses a part of its existing system.

It is probably very fortunate that so much flexibility of organization has been incorporated in this act. This broad measure, which will affect the educational system of our vast country with its great variety of industrial conditions and possibilities, gives an unequaled opportunity for the study and trial of curricula, methods of teaching, practical work, equipment, etc., adapted to a wide range of vocations and very diverse environments.

The training of the teachers provided for will throw a very heavy burden of responsibility on our higher technical institutions and particularly the land-grant colleges. These institutions have been very successful in training technical experts who have contributed in large measure to the success of our industries. They have not as yet paid any large attention to the training of teachers for secondary schools of the strictly vocational type. The pedagogy of this class of education is yet in its preliminary stages. It evidently will not do simply to copy what has been worked out abroad. There is therefore great incentive for men of original thought and inventive skill to enter this comparatively new field of teacher training.

For purposes of administration and inspection under the Smith-Hughes Act the Federal board has divided the country into five sections or regions. In defining these regions the States are grouped as follows:

I. *North Atlantic.*—Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Delaware, and Maryland. Headquarters in New York City.

II. *Southern.*—Virginia, North Carolina, South Carolina, Georgia, Florida, Tennessee, Mississippi, Alabama, Arkansas, Louisiana, and Texas. Headquarters in Atlanta, Ga.

III. *North Central.*—Michigan, Ohio, West Virginia, Indiana, Kentucky, Wisconsin, Illinois, Minnesota, Iowa, and Missouri. Headquarters in Indianapolis, Ind.

IV. *West Central.*—North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Montana, Wyoming, Colorado, and New Mexico. Headquarters in Kansas City, Mo.

V. *Pacific.*—Idaho, Utah, Arizona, Nevada, Washington, Oregon, and California. Headquarters in San Francisco, Cal.

An agent of the Federal board for the fields of agriculture, trade, and industrial subjects is assigned to each region; the agents for home economics remain in Washington. These Federal agents are, in general, to act as administrative representatives of the Federal board in the field, to gather information regarding methods adopted by the several State boards for the administration of the act, and to inspect the work of the State boards in so far as it has to do with the requirements of the law, with the decisions and policies of the Federal board and with the approved plans for the States.

Up to January 1, 1918, 48 States have accepted the Smith-Hughes Act either by specific provisions of the legislatures or by act of the governor, and up to January 1, 1918, the plans of 48 States had been examined by the Federal Board for Vocational Education, approved, and the board had certified to the Secretary of the Treasury that these States were entitled to receive the allotments for the year 1917-18, apportioned by the terms of the act.

Over 500 agricultural schools and classes were approved by State and Federal boards for carrying on the work in agriculture under the provisions of the Smith-Hughes Act.

The chief handicap in the promotion or introduction of vocational agricultural instruction was the lack of qualified teachers. This was due largely to the present war emergency—many of the agricultural teachers being drafted or volunteering for service in the Army.

In practically every State the State board for vocational education has provided a State supervisor of agriculture. In some cases this supervisor is a part of the organization of the State board and in some cases he acts in a dual capacity as head of the teacher-training work under the provisions of the Smith-Hughes Act and State supervisor of agriculture. This arrangement is due largely to a lack of funds on the part of the State boards for carrying on supervisory work.

In every State but one the State board for vocational education has designated the land-grant college as a teacher-training institution in agriculture. As a result of their designation as teacher-training institutions under the provisions of the Smith-Hughes Act, they have organized departments of agricultural education and are proceeding along very definite lines to train vocational teachers of agriculture.

THE ELEMENTARY SCHOOLS.

There has been continued effort on the part of many agencies to promote the various phases of elementary agriculture in the common schools.

Minnesota.—The work in agriculture in the rural schools has practically all been in the form of boys' and girls' club work. The majority of county superintendents have acted as county club leaders directing the work. The work has been taken up along 10 lines of home projects—corn, potato, pig, calf, garden, canning, poultry, cow testing. bread making, and sewing. Something like 5,000 boys' and girls' clubs were organized in the rural districts in 1918. Most of these come from the rural schools as a unit, with the teacher as the local leader and the county superintendent as county club leader.

New Hampshire.—For the past five years efforts have been made and plans formulated for converting the old-time nature study in rural schools into elementary agriculture of a practical type. During the year 1918, that effort has culminated in enrolling 32,000 school children in home-project gardening. This has been directly under school management through the State department, local superintendents, and teachers.

California.—The California State Board of Education passed the following regulation relative to agricultural instruction in normal schools: "For students entering after June 30, 1919, one unit shall be required in manual training or household arts or both, and one unit in the elements in agriculture, including practical work in gardening, floriculture, and plant propagation."

Massachusetts.—As a result of the appointment of county club leaders in each one of the county farm bureaus in the State, a thorough canvas of the rural schools has been made in an effort to interest them in both home and school garden work and junior extension club work. From 75 to 85 per cent of the rural schools have been reached during the past two years through these agents. In a few instances this has resulted in the establishment of some definite course in agriculture or home economics in these schools.

The extension division of the college of agriculture during 1918 made an effort to arrange a course satisfactory to high-school men that would be accepted by the college for credit on admission. It is felt that this would lead to steps to establish the work in elementary schools to fit the work in the high schools.

Wyoming.—The only teacher-training institutions below college grade in the State are some high schools offering one year of normal training. These schools were established in the fall of 1917, and the only work in agriculture offered in such schools is a short general course in agriculture that is designed to prepare pupils to teach in the elementary schools.

Michigan.—Three new county normal training classes have been established in the State in the past year and a few for the purpose of training rural teachers, making in all 53 such institutions. A law was passed in 1917 requiring all persons who are teaching in the elementary schools to have at least six weeks of professional training before a teacher's license can be issued to them. In all institutions giving training for rural teachers a semester's course in elementary agriculture and in the pedagogy of such subjects is given.

Montana.—In 1918 a bill passed the legislature making agriculture a required subject in the elementary schools. A course of study has been prepared including agriculture. Home project work is a part of the course of study and the State superintendent of public instruction has approved credit for project work to the extent of 50 per cent each year.

Kansas.—The teacher-training institutions below college grade offering work in agriculture are the high schools which are reimbursed from State funds for normal training work. These high schools are offering either one-half unit or a unit of agriculture as a part of the high-school work for those who are planning to teach. Previous to 1916–17 agriculture was not a fixed requirement, now at least one-half unit is required in all normal-training high schools. About 90 per cent of them, however, give a full unit of that work. The State grants aid of approximately $200 for this work in approved high schools. The number of high schools giving the work now is 234, and the number giving the work before 1916–17 was 185.

North Carolina.—At the last session of the general assembly a bill was passed providing for a commission to be appointed by the governor for the purpose of preparing leaflets and bulletins containing courses of study, practical outlines in agriculture, to be used by the teachers as supplements to the text. Two bulletins, one for the sixth and one for the seventh grades have been prepared. These bulletins are somewhat in the form of laboratory manuals following the project plan, and it was thought by State officials that they are going to prove a great help to the teachers in making their agricultural work more practical.

New York.—An act of the New York State Legislature for 1917 provides for the employment of directors of agriculture in cities, towns, and school districts not maintaining a school of agriculture, mechanic arts, and home making. The purpose of this act is to employ a person who shall devote his time to interesting young people in practical agriculture and to giving technical instruction accompanying their practical work; to encourage cities and villages to employ supervisors for school, home, and vacant-lot gardening. The commissioner of education will apportion to each city, town, or school district employing or joining in the employment of a director of agriculture a sum equal to one-half the salary paid to such director, not exceeding each year the sum of $600 for each director employed. The purpose of this work is to encourage boys and girls to undertake agricultural enterprises adapted to their home conditions. The projects may include poultry, pig, and calf raising, growing a certain area of general garden or corn, potatoes, or other farm crops. A complete scheme is found in Bulletin 654 of the University of the State of New York.

Indiana.—Educational Bulletin No. 32 of the Vocational Series No. 17, entitled, "Supervised Home Project and Club Work," contains what is considered the ideal organization for club work in a county. It is described as follows:

> An attempt is being made in Montgomery County to perfect a more complete organization than has been possible heretofore in the State. With the financial assistance of the States Relations Service of the United States Department of Agriculture and the cooperation of all the agencies of the State and county, it is hoped that an organization will be perfected that will serve as a model for other counties.
>
> The work in this county is being directed by the county superintendent of schools and the county agricultural agent, working through a committee representing the board of education and such allied county organizations as the com-

munity association, the county fair association, the home economics association, the chamber of commerce, and the live-stock breeders. The fullest cooperation is assured from the banks, grain elevators, and business men. The teachers and their officials and supervisors are interested and in sympathy with the movement.

Each township will employ at least one teacher as a club supervisor. This local supervision will begin February 1, and while the schools are in session each township supervisor will devote time outside of school hours to visiting schools, arousing interest and getting the enrollment. At the close of school, the time of the township supervisor will be spent in visiting club members and giving instruction.

A county director of club work, giving full time to his task, is employed for the full year. He is to work with the township supervisors and teachers, under the direction of the county superintendent and county agent. He will train supervisors, assist in supervising the instruction in agriculture, distribute literature, and correlate the work generally.

Township and county exhibits, demonstration teams, club meetings, and frequent conferences are planned.

AGRICULTURAL EDUCATION AT MEETINGS.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The annual meeting in 1917 of the American Association for the Advancement of Science is one of the great scientific events of the year. It is a vast clearing house for ideas and results in science, and for the testing and molding of views. It presents the largest forum in this country for healthy, tempered but searching criticism in science, without which science becomes self-complacent, lax, and unexacting in its requirements.

The section of agriculture confined its program to a single session and was presided over by Dr. W. H. Jordan, of the New York State Experiment Station. Taken as a whole, the discussions were a frank acknowledgement of the present limitations of our agricultural knowledge, especially the full understanding of it, and some of the difficulties in its application in successful farming. It was a somewhat critical analysis of experimental methods, and it sounded a caution against premature generalization from laboratory results to the farm. As Dr. Jordan stated, the stations have been and are still putting too much time on mere variables that have no broad significance, and too little time on broad fundamentals. He called attention to the fallacy and unwisdom of attempting to state results in terms of dollars and cents, since these have no real permanent or scientific significance.

Speaking of the training of the investigator, Dr. L. H. Bailey held that the the research man should be a student in all that the name implies. The investigator in horticulture should have a grounding in chemistry, physics, and physiology, for the grasp they give on methods and approach. And he should have training in systematic botany, not alone for its knowledge of plants but for its key system, for the drill in comparing things that are actually comparable. His training should also give him a contemplative, reflective habit of thought; and he should always continue to be a student. Unless he continues to acquire much of his preparation as he goes, his research spirit has got its growth. The investigator must prepare himself for each separate piece of work.

In addition to this training in the sciences, emphasis was laid on the need for much study of English, to give familiarity with words and terms in order to make sharp discriminations and comparisons, and to enable clear expression of thought and deduction. This is an all too frequent lack at present. Science is exact, in expression as well as in essence. No worker has a right to be understood except in the terms of his own language. Good training in logic was also advocated, in weighing of evidence, because ability in that line is one of the prime essentials of the investigator.

ASSOCIATION OF AMERICAN AGRICULTURAL COLLEGES AND EXPERIMENT STATIONS.

Following the general policy adopted many years ago of meeting in alternate years in Washington, D. C., the Association of American Agricultural Colleges and Experiment Stations held its thirtieth annual convention in that city November 15–17, 1916. The selection of the Nation's capital this year seemed especially appropriate, in view of the predominance in the program of questions of nationwide significance, the important relationship developing with various branches of the Federal Government, and the plentiful evidences of the growing realization of the essential kinship and community of purpose of the institutions comprising the great Federal system of education and research for whose interests the association stands.

The program of the association was by no means restricted to agricultural lines. The interests of the association are, of course, considerably broader in scope, and this year, in particular, much emphasis was put upon what may be termed its nonagricultural phases. In the general sessions especially, aside from the addresses of the Secretary of Agriculture and the president of the association and the presentation and discussion of the reports of the standing committees, attention was centered quite largely on the proposed establishment by the Federal Government of engineering experiment stations, the development of military training in the land-grant colleges, and the best ways of conducting extension work in home economics and similar lines of interest to farm women. This trend of the convention, however, in no sense betokened a diminution of interest in agricultural education and research. On the contrary, it may be questioned whether the realization of the outstanding importance of these phases, and especially the need of adequate and systematic provisions for research, was ever more strongly in evidence. For example, it was the dominating note in the presidential address, given by Director C. E. Thorne, of the Ohio Station, upon the subject of "Progress of education and research in agriculture." Director Thorne reviewed the history of the land-grant colleges, especially in their relations to the experiment stations, and sounded a note of warning that the temptation to neglect the work of the stations in order to take care of the great pressure for educational work must be strongly resisted if permanent progress is to be made. As he pointed out—

> science can not stand still. Every extension of the horizon of our knowledge only expands the boundary of the unknown, and makes yet more imperative the necessity for further research, and the institution which contents itself with present knowledge will soon find itself forgotten.

College instruction in agriculture was discussed from several points of view. The report of the standing committee on instruction in agriculture dealt with the question of college credit for high-school agriculture. This included a study of existing conditions by D. J. Crosby, which indicated that agriculture is now accepted as an entrance subject in 44 of the 48 States, but that only one institution allows advanced credit. It was found that agriculture is now taught in 19 per cent of the high schools of the country, and the committee considered this a factor which might well be taken into account in college instruction to a greater degree. Certain fundamental principles of agriculture, it pointed out, might be taught as effectively in the high schools as in the freshman class, or even better if the college instruction is delegated to fellows and assistants of limited years and experience.

Some obstacles, however, were recognized to the acceptance of high-school agriculture, especially the wide variation in the grade of work accomplished. Care is needed in the selection of textbooks and apparatus and the outlining of courses, and it was suggested that the colleges might here render a useful service. In 28 States there is no systematic supervision of high-school instruction in agriculture. In some States the college and the State board of education cooperate, but it was believed that the efforts of the colleges in this field should be suggestive rather than arbitrary, and should scrupulously avoid the appearance of domination.

"Methods of improvement in teaching college agriculture" was discussed by Dean W. W. Charters, of the school of education of the University of Missouri. Dean Charters pointed out that the important thing in education is not apparatus or buildings or equipment, but the classroom intercourse of teacher and student. He believed that the present teaching of agriculture is very uneven in quality. One difficulty is that the results of teaching are less tangible than those of research and therefore easy to judge in a comparative way. The code of professional ethics which bars instructors of equal rank from the classrooms of others also hinders improvements and obscures the merits of efficient teachers. More attention to the formulation and application of pedagogical principles of agricultural instruction was earnestly advocated. It is of interest to note that very similar views were expressed in the section on engineering as regards instruction in that subject, and that close cooperation with schools of education was a suggested remedy.

The thirty-first annual convention of the Association of American Agricultural Colleges and Experiment Stations, held in Washington, D. C., November 14–16, 1917, seems likely to be long remembered as one of the most interesting and inspiring in the history of the organization.

The important service of the land-grant institutions in this country was attested by several speakers. Thus Secretary Houston declared that while at the time the country entered the war the Nation was not fully prepared for war in any respect—

> It was fortunately circumstanced in the character of its agricultural organization and the number and efficiency of its expert agencies. In fact, in efficient machinery for directing agricultural activity as represented by the land-grant colleges, the Federal Department of Agriculture, farmers' organizations, and its alert and patriotic rural population, it excelled any other two or three nations in the world combined.

"The Nation may well pride itself," he said, "on the fact that it had had the foresight generations ago to lay deep its agricultural foundations." He congratulated the representatives of the land-grant colleges on the fine opportunity for service presented to them and on the splendid way in which they had seized it:

> The Department of Agriculture has had great comfort in the thought that these institutions, ably planned and wisely directed, existed in every part of the Nation and stood ready not only to place themselves at the service of the National Government but also to take the initiative in a vast number of directions.

The duty of the agricultural colleges in teacher training was pointed out by the standing committee on instruction in agriculture in its report on college teaching in agriculture, with particular reference to the improvement of methods. In this report the committee expressed the view that:

> Strong departments of agricultural education will be needed under the administration of the Smith-Hughes Act in order to give the colleges of agricul-

> ture the positions they should occupy in the training of teachers of agriculture. Unless these colleges take up the teacher-training work actively at the present time, the funds provided for this work under the Smith-Hughes Act are likely in many States to be divided among a number of institutions, including some of relatively low grade and poor equipment, with the result that our whole system for training teachers of agriculture will be fundamentally weak. The agricultural colleges ought to have a clear leadership in this field, and they can not have this unless they adequately equip their departments of agricultural education.

The committee also urged the development of such departments as a means of improvement of college teaching in general. It was recognized that in the past a large proportion of college graduates without special pedagogical training have done well as teachers, but—

> they have succeeded in spite of the lack of professional training, and the percentage and degree of successes might have been much larger if the professional training had been provided. No matter how well manned and equipped the subject matter departments of the colleges of agriculture may be, they need the help of strong departments of agricultural education, not only in the training of undergraduates for teaching positions but also in improving the quality of teaching within the subject matter departments.

The 1917 convention revealed how closely the war has been brought home to the land-grant institutions, depleting the faculty and student body, interrupting many well-established projects, and compelling a redirecting of their entire program and point of view. More strongly, however, did it indicate how largely the Nation is relying on these institutions in the present emergency, and how important are the functions which are theirs to fulfill. It put this great body of public-service institutions, already conspicuous for a season's successful endeavor, formally on record as enlisted for the war, and with their full resources mobilized in the national service.

NATIONAL DAIRY SCHOOL.

The first New England meeting of the National Dairy Show was held at Springfield, Mass., October 12–21, 1916, on the grounds of the Eastern States Agricultural and Industrial Exposition. All previous records for attendance, exhibits, and profits are said to have been broken. Nearly 1,000 entries of dairy stock were on exhibition and the attendance is estimated as averaging close to 30,000 per day.

Much prominence was given to educational features at the show. The United States Department of Agriculture gave special attention to its extension work among boys and girls, with several thousand exhibits of their work and many demonstrations by boys and girls illustrating methods in canning, bread making, dairying, selection of seed corn and potatoes, gardening, treatment of plant diseases, etc. A working dairy was also in operation by the department.

The intercollegiate stock judging contest was participated in by 18 institutions, many being represented for the first time. The highest rating for all breeds was attained by the University of Nebraska, with New Hampshire first on Ayrshires, Kansas on Guernseys, Massachusetts on Jerseys, and Nebraska on Holstein-Friesians.

There was also an intercollegiate butter judging contest, arranged for the first time. In this contest nine institutions were represented, first place being awarded to the Pennsylvania College.

After a lapse of three years, occasioned by the foot-and-mouth disease situation, the Fourteenth International Live Stock Exposition was held at Chicago in December, 1916. The agricultural colleges were again strongly in evidence, both the grand champion and the reserve champion in the bullock section coming from the University of California.

A new feature of the show is to be a special exhibit each year from some one agricultural college. The institution selected to initiate this practice was the University of Illinois, which depicted in miniature its campus and buildings and likewise a model farm divided into fields supporting a profitable and soil-building rotation as well as much other illustrative material.

At the students' stock judging contest, 16 institutions were represented, 3 for the first time. The first place was awarded to the team from Purdue University, second to the Iowa State College, and third to the Ohio State University.

Following a meeting called by the American Pomological Society, a National Congress of Horticulture was organized at Washington, D. C., in November, 1916, to serve as a central clearing house of horticultural interests. Active membership is to consist of delegates appointed by affiliated horticultural organizations on the basis of membership, and it is hoped thus to enroll representatives of from 50,000 to 60,000 members.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF AGRICULTURAL TEACHING.

The seventh annual meeting of the American Association for the Advancement of Agricultural Teaching was held in Washington, D. C., November 14, 1916. Two main topics were presented for discussion, the content of the course in the college of agriculture for prospective high-school teachers of agriculture and the high-school course in agriculture.

Under the first of these, Dean C. F. Curtiss discussed the relation of the sciences. He thought that the science taught ought to be applied science, which will directly connect up with the work of the farmer and the community in which the teachers will serve.

As to general professional subjects, K. L. Hatch held that psychology is the basis of the professional preparation, but that whether or not there should be a course in general education is doubtful. The student's time is so taken up with technical work in agriculture that an effort should be made to reduce the professional preparation to the minimum. The course in agricultural education ought to include the principles of general methods. A certain amount of practice work should be required with real students, with real classes and conditions, and with problems teachers are going to meet. Prof. Hatch also discussed at length the growing demand for a course in the college known as general science or elementary science. In discussing this paper R. W. Stimson laid stress upon the importance of training college teachers of agriculture, if for no other reason than that the prospective teachers coming under their influence may imitate good teaching.

G. A. Works took up "The content of the methods course for high-school teachers of agriculture," outlining the work given in the New York State College of Agriculture. This course, which is given three or four times a year, is open only to seniors. It runs for a term with two discussion periods and one laboratory period 2½ hours in length each week. The class is limited to 50 and each laboratory section to 12 students. The laboratory and lecture work are closely correlated throughout the course, and special attention is given to the selection of material adapted to the high-school pupil and to its arrangement in seasonal sequence. Other topics taken up are the place of the home project and the organization of study material for the recitation lesson, the laboratory, and the field trip. A visit to a near-by high school is made for the purpose of studying equipment, library, and home projects, and some work is done in chart making and bulletin collecting and cataloguing.

In a paper on "How to connect the high-school work with practical farm operations," A. K. Getman suggested (1) a seasonal distribution of the topics studied, the study to coincide with the operations on the farm; (2) provision for field and laboratory work; and (3) the use of the home project properly planned, accounted, summarized, and supervised.

C. H. Lane, in a paper on "The content of high-school courses in agriculture," said that it is not merely a question of what is worth teaching and studying, but what is best considering all local conditions, equipment, time, teacher, community interests, adaptations, etc. Thus, the determination of the content and arrangement of a course in agriculture becomes a local problem and no general solution can be given that will apply equally well to all localities. The following outline of work was, however, suggested: First year, practical work on how plants grow, soils and fertilizers, and field crops or fruits and vegetables, the choice depending upon local conditions as regards available material and interest in home project work. The second year should be given to the study of live stock. After such general courses the student is prepared for more special work. In sections where horticulture is important the third year may well be spent in such specialized branches of plant production as fruit growing, practical work on soils and fertilizers, cover crops, etc., as relate to the production of fruit, or market or vegetable gardening, and one-third of a unit on improvement of home grounds and ornamental planting.

Similar specialized courses should be provided in districts where one or more field crops, dairying, or some other special phase of animal husbandry predominates. In districts having broad interests in agriculture the school should be equipped to offer a number of special courses during the third and fourth years. While the subject of tools, implements, and machinery is necessarily considered in connection with crop production, the subject of farm mechanics is deemed sufficiently important to receive special attention during the fourth year. A half unit in rural economics and farm management should not preclude careful accounting in connection with the projects of each of the previous years nor the study of simple methods of accounting in connection therewith.

NATIONAL EDUCATION ASSOCIATION.

The usual attention was given at the meeting of the National Education Association at Portland, Oreg., July 7–14, 1917. The general topic considered by the National Council was "Agricultural preparedness and food conservation." W. H. Campbell, representing the Farmers' Educational and Cooperative Union of America, presented a paper at the section of the Department of Rural and Agricultural Education on " The rural people a strong factor in rural education problems," which dealt with the revision of the whole educational system of this country from the top down and with the building of a centralized school and its development into a community center for the people in Johnson County, Nebr. The speaker urged that the universities and normal schools be put on a full year, four-quarter plan, and have a department that will receive mature students who have completed the rural school. These universities and normal schools will then be in position to release students for winter vacations for the purpose of teaching short winter terms in the country. These terms should include a course strong in agriculture and domestic science, farm accounting, manual training, and mathematics.

In an illustrated address on "Results achieved in secondary agriculture and methods pursued in actual practice," H. N. Goddard of the Department of Education of Madison, Wis., indicated the progress in the development of secondary agricultural instruction. He stated that two viewpoints have developed in relation to the work, the informational or cultural and the vocational. The latter has gained in relative importance while the informational idea lacks sufficient motive and fails to give vocational training.

In the opinion of the speaker the school plat is a valuable school project and is desirable wherever it can be made certain that it can be well cared for during the summer vacation. The school farm of large size offers many difficulties and should not usually be undertaken in high-school departments. Among successful school or group projects, aside from the school plat, are steer fattening, keeping dairy cows, cow testing, poultry work, shopwork, and construction of all kinds of farm buildings. The school plat should be used for crop production demonstrations, illustrative material, and out-of-door experiments. Home or individual projects, regarded as the more fundamental, have included practically every phase of farm practice that can be carried out on the home farm or garden. Exhibits and contests have been very commonly developed in connection with the projects. Most important of all is the annual school fair held in most high-school departments, where the productive results are rounded up in direct connection with the school community. A large amount of extension work has been carried on. A large general result of all the work has been evident in greater interest and intelligence in the best farm practice and in rural life. A large per cent of the boys and girls in these courses are actually going back to the farms with minds awakened and trained for enthusiastic and efficient work. Many city boys have also been directed to the farm for their future occupation.

It is the unanimous opinion of this department of the association that the time has fully arrived for the establishment of special normal schools whose sole function is the study of industrial, social, and educational rural problems, and the training of teachers who are able to cope with these problems.

AGRICULTURAL EDUCATION IN OTHER COUNTRIES.

AFRICA.

A fifth school of agriculture has been erected at Glen, in the Orange Free State, the opening of which has been postponed because of the financial stringency created by the war. It has a farm of 4,000 acres, acquired at a cost of $97,200, and school and farm buildings erected at a cost of $194,400.

The schools, which are located at Elsenburg, Middelburg, Cedara, and Potchefstroom, and the new school at Glen, are located on large, well-stocked, and well-equipped farms, and offer the following courses: A one-year certificate course including theoretical and practical instruction in agriculture and live stock, farm economics and bookkeeping, agricultural engineering, veterinary science, poultry husbandry, horticulture, viticulture (at Elsenburg), and dairying; a two-year diploma course, including, in addition to the preceding subjects, agricultural chemistry and geology, agricultural botany and bacteriology, and agricultural zoology and entomology; a three-year advanced diploma course; a special course in dairying at the Grootfontein school at Middelburg, followed by practical work in a factory dairy; a two-week short winter course open also to women. At the request of the university council of the Cape of Good Hope, courses have been prepared and submitted for the third and fourth years at the agricultural schools for the degree of B. S. in agriculture.

BRITISH ISLANDS.

In 1916 the Board of Agriculture and Fisheries, dealing with the agricultural education work of the various institutions and local authorities in England and Wales, decided as a measure of war economy, to suspend the grants to the Harris Institute, Preston, and to the Royal Horticultural Society's School at Wisley. The Royal Agricultural College, Cirencester, and the Agricultural College, Uckfield, Sussex, were closed in the summer of 1915, owing mainly to the serious decrease in attendance. All of the institutions have suffered as a result of the war. The new buildings at the Armstrong College, Newcastle, have been wholly utilized as a hospital since the beginning of the war, and rooms in the School of Agriculture, Cambridge, and in Wye College, were occupied for a time for military purposes. The Royal Veterinary College, London, is the only institution whose activities have not seriously diminished. To encourage cheese making instead of butter making, with a view both of conserving the food supply and the economical utilization of surplus milk, the board developed a scheme of establishing traveling cheese schools, under which it loaned sets of apparatus to local authorities who agreed to make new and additional provision for itinerant instruction in this subject. Nineteen authorities availed themselves of this offer, and 33 new schools were created in addition to 5 previously in existence.

A report in 1916 on the question of education in its relation to agriculture, with special reference to the problem of how to increase the annual output of skilled cultivators of and workers on the land, by the education committee of the Central and Associated Chambers of Agriculture of Great Britain shows that 50 years ago the number of men working on the land in the United Kingdom was greater by

1,000,000 than it is to-day and to the concurrent steady decline in the production of the land. The committee recommends that the instruction of the elementary schools be made more practical and more truly based upon surrounding life; that new schools of the following types be created: (1) Centralized continuation day schools of the type existing in Canada, (2) the creation of a system of lower-grade instruction centers with courses that would review, complement, and give a more directly vocational bearing to the practical work already done in the schools for boys and girls, (3) a new type of farm school for boys and girls between 13 and 18 years of age to continue the instruction from the elementary school and definitely prepare them for settling on the land either in the United Kingdom or in the British Dominions, and (4) farm lads' clubs; that definite measures should be taken to interest the children in town schools in country life and to induce more poor law children to become interested in the cultivation of the land; that as far as possible all reformatories and industrial schools should have farms attached and the pupils be more directly encouraged to study agriculture; that continuation instruction should be compulsory; and the development of training to enable country children to enter the teaching profession.

Plans are under consideration for the establishment by the Board of Agriculture and Fisheries and the Board of Development Commissioners of Great Britain of a research institute for problems relating to agricultural machinery at Cambridge University in connection with the existing schools of agriculture and engineering.

A movement is on foot to raise a fund of $750,000 for the erection of new science buildings at the University College of North Wales "as a memorial to the men of North Wales who have fallen in the war." A gift of $100,000 has already been secured. It is announced that special prominence is to be given in the new buildings to agriculture and forestry.

The Southeastern Agricultural College at Wye, England, has organized a research and advisory department distinct from the teaching side of the college and governed by a separate representative committee, composed in part of research workers at the institution and in part of other scientific men. Some of the work in progress and in contemplation includes problems connected with the general practice of fruit growing, the biological study of flax, the conservation of fruits and vegetables, pasture studies, diseases of sheep, hop breeding, and fungus diseases and insect pests and their treatment by spraying.

The tropical school of agriculture which was opened at Peradeniya, Ceylon, January 15, 1916, received 77 students during its first year of operation. Each student had to cultivate one-sixteenth acre and grow three crops on it, a pulse, a grain, and a vegetable, conducting all the operations himself. The average age of the students was 21 years. The school staff consisted of a registrar and four agricultural teachers who held the diploma of the Pooma Agricultural College and who carried out the ground work in all subjects. Ceylon had a total of 327 school gardens in 1916, an increase of 40 over the previous year. Government grants were received by over 160 schools for school-garden work.

CANADA.

In the four years that the agricultural instruction act has been in operation it has contributed a total of $3,400,000 to the Provinces. With the year 1917–18 the grants reach their maximum of $1,100,000 a year to continue until the completion of the act on March 31, 1923.

In the Province of Prince Edward Island, $2,500 is set aside for bonuses to teachers who give instruction in nature study and agriculture. Teachers especially trained in two sessions of the summer school receive $7 for the first half year and $5 for the second; those especially trained in one session of the summer school receive $6 and $4; and those who have not attended summer school but are doing creditable work receive $5 and $3. The requirements for grants include: (1) Systematic instruction in rural science in the school every week throughout the term; (2) a written report on the provided form to the department of education at the close of the term showing the instruction that has been given; (3) pupils' records of the work systematically kept in special rural science notebooks; and (4) supervised projects or gardens at the pupils' homes, or a well-kept school garden in which there are some valuable demonstrations and experiments with vegetables or field crops, or with both, as well as attractive flower beds and borders. A school garden neglected in the summer holidays will disqualify for part or all of the bonus.

In 1916 the provincial ministry of agriculture of British Columbia, which until then had always been united with some other ministry, was made a separate and distinct department.

Agricultural instruction has recently been introduced into the high schools of British Columbia in a systematic way. The first class in the Province was organized in September, 1915, and was followed by similar instruction in four other high schools in September, 1916. The instruction is being given by agricultural specialists, and is attended by a total of about 130 boys and girls. A two-year course has been outlined for these schools.

Equipment costing about $400 is available in each school, with from one-half to one acre of land for experimental and demonstration plats. The salary of the instructor is paid by the provincial department of education, and the remaining expenses by the local authorities.

The Alberta Department of Agriculture began extension work in agriculture last spring with district agents in the field at various points in the Province. The minister of education is cooperating to the extent of making the time of the classes in school available to the agents for the carrying on of the work in cooperation with the teacher and inspector. The plan is to have the pupils take actual part in the growing of garden crops, the raising of chickens, and the feeding and management of young stock on their own farms. Initial group instruction in the laying out, planning, and general cultivation of the home garden is given in the schools, where leaflets and bulletins, seeds, and a limited number of eggs are distributed. Competitions in caring for stock are carried on and the season's program culminates in a fall fair held in conjunction with the district fair or at the most convenient school or village center. The work is being conducted in five centers and about 100 schools are taking part in it.

In a special effort to populate and bring under cultivation large areas in northern Ontario, an agricultural high school and demonstration farms at New Liskeard, a government creamery at the same place, a 50-acre demonstration field near Matheson, and a plant breeding station at Fort William are to be established.

Plans are also under way for the necessary buildings and equipment for a new agricultural school to be established, through the Ontario Department of Agriculture, near Kemptville in eastern Ontario. It is intended to give useful and practical instruction in agriculture to young men between the ages of 16 and 25 who have left school. It is not proposed to duplicate anything already being done in the Province unless to some extent the first two years of the course at the Ontario Agricultural College. The regular course will not be longer than two years and there may also be a number of short courses.

Special provision has been made in Ontario for furnishing homesteads to returning soldiers. These soldiers will first be sent to an agricultural training depot being established at the Government experimental farm at Monteith, where they will receive instruction. When a sufficient number have been trained, a farm colony will be opened at some point along the railway in charge of a competent superintendent. Farms containing not over 80 acres will be laid out and so planned as to bring the various farm houses as closely together as possible. A 10-acre tract will be cleared on each farm, and when this is completed the farm may be allotted free of charge to a soldier. He may also receive machinery, live stock, etc., to the value of $500, this being reimbursable within 20 years. The final title to the land will be given after five years. The community system will be followed in supplying horses, other stock, and implements, and cooperative methods of buying and selling will be used.

Other plans for placing soldiers on the land are also under consideration.

The chief of the Military Convalescent Home of Sans Bruit, Quebec, has made arrangements for teaching agriculture to convalescent soldiers, the courses being in charge of a district agricultural representative. Instruction has been given in practical work in drainage surveys and rotations on the hospital farm, commercial poultry keeping, market gardening, and beekeeping. Some of the convalescents have also helped in field husbandry, soil preparation, harvesting, etc.

What are known as the royal agricultural schools, incorporated by the legislature of Quebec, are designed to give instruction to the sons of soldiers. These schools and farms are situated in the township of Howard, Argenteuil County, and are open to the sons of all soldiers who have taken part in the war. The property of the schools consists of 3,468 acres, with a large residential building to accommodate 25 boys, a residence for teachers, and a number of cottages for workmen. The parents of the boys will be under no expense for their sons while they are at the schools, and when of sufficient age the boys will be assisted in making a start for themselves.

CHINA.

Considerable attention is now devoted in China to agricultural education and experimentation in various classes of institutions. An experiment station was located at Peking in 1907, under the control of the board of agriculture, industry, and commerce. An experimental tract of nearly 300 acres is available, and departments of crops, soils, animal husbandry, horticulture, floriculture, entomology, botany, forestry, bacteriology, and biology have been put in operation. In 1907 an agricultural college was organized in connection with the station, but this was disbanded in 1915.

Subsequently an agricultural college and experiment station was established at the capital of each Province along much the same lines as at Peking, and many other stations in additions. There are now reported to be 130 stations in the 22 Provinces, of which 31 are in Chihli, 25 in Szechwan, 15 in Hu-Long-Kiang, 7 in Hupeh, and 7 in Kwangtung.

Among these are two cotton-experiment stations, one at Cheng Ting Hsien, Chihli, and one at Nan T'ung Chou, Kiangsu, with a third under consideration at Tung Haing Chou, Hupeh. Experiments are being conducted at these stations in seed selection, seed distribution, plant harvesting, soils and manures, treatment of pests, and cotton weaving. A corps of students is also being trained at these stations.

Stock-raising experiment stations have been established at Kalgan and Shih Men Shan, Anhui. These are expected to study the improvement of breeds of domestic animals, promote the breeding and sale of stock and stock raising enterprises, and the cultivation of forage crops.

Considerable attention is also being devoted to forestry in China. A department of forestry was organized in January, 1916, with a forestry commissioner in each province. Forestry-experiment stations and training schools have been established at Ch'ang Ch'in Hsien, Shantung, and in the Temple of Heaven at Peking.

The university at Nanking has maintained a college of agriculture and a school of forestry for several years. This is an American-supported institution, and in 1915 had enrolled about 70 students in agriculture. A colonization association has been organized under its auspices, with provision for the reservation of about 35 acres in each colony for a model farm. A tract already purchased on Purple Mountain, just outside Nanking, is to be used as an experiment station in connection with the different colonies.

An agricultural experiment station was opened at Nanksuchou, Anhwei, in 1915, as a part of the American Presbyterian mission station. Agricultural work was taken up at this institution partly as a practical way to teach Christianity, partly to make friends, and partly to improve economic conditions. The station is located on the railway between Nanking and Tientsin, and attempts to serve an area of about 6,000 square miles and from 1,500,000 to 2,000,000 people. The farming methods in use are those of from one to two thousand years ago. Special prominence is being given in the experimental work to seed selection, better tillage methods, more and better fertilization, drainage, and animal husbandry. The work is to be largely of a demonstration nature during the present pioneer stage, and will also include an agricultural school, a school farm, and short winter courses for farmers.

LATIN AMERICA.

According to the Bulletin of the Pan American Union a practical school of agriculture has been opened at Aconcagua, in Chile, and steps have been taken to found an agricultural school for women in the Province of Aconcagua.

The agricultural school at Challapata, Bolivia, for the instruction of the natives has been moved to Rosario Plantation, near the town of Challapata, and enlarged.

A recent executive decree in Colombia provides for the establishment of a tropical agricultural station annexed to the national institute of agronomy in the municipality of San Lorenzo, Department of Tolima. General instruction is expected to be given in various branches of agriculture and allied sciences, including veterinary science, and courses will also be arranged for students who desire to specialize along certain lines. Particular attention will be paid to teaching students how to distinguish beneficial from injurious insects met with in practical agriculture. The government of the Department of Antioquia has taken preliminary steps to establish a laboratory for the manufacture of vaccine to be used by stockmen in the prevention of murrain and similar diseases of cattle. A recent executive decree places the national meteorological service, established in 1917, under the department of public instruction.

The school of agricultural mechanics at Bahia Blanca, Argentina, which admits pupils of not less than 17 years of age, had an attendance of 32 in 1916. The shops of the school have been equipped with new machinery.

The Department of Agriculture of the Dominican Republic has provided a traveling agricultural instructor to recommend measures for obtaining more abundant yields of staple crops. An agricultural school was recently organized at Charpentier, Haiti.

An agricultural experiment station of the coeducational schools of Amatitlan, Guatemala, recently began operations, the equipment having been donated by a philanthropic citizen of the community.

In Mexico a school of agriculture was opened in Hermosillo, the capital of the State of Sonora, in March, 1917, under the direction of the governor of that Commonwealth. In the same month a national forestry school was inaugurated at Coyoacan, a suburb of the City of Mexico. The agricultural experiment stations in the States of Vera Cruz, Puebla, San Luis Potosi, Oaxaca, and Tabasco have been supplied with modern machinery and appliances, as well as improved seeds, and instruction by experts will be given to farmers in these States. A publication entitled Rivista Agricola has been founded in the national capital.

An agricultural school has been established in the Department of Leon, Nicaragua, with Manuel Godoy as president. The Government has also formulated a plan for a course of instruction in the new national school of agriculture, according to which there will be a section for the instruction of laborers or farm hands, a section for agriculturists or farmers, and a section for agronomists or agricultural engineers. The governor of each Province is to select by competitive contests two boys who have passed the fourth grade of primary instruction and are over 13 years of age for entrance into this school at the expense of the State. A school for boys not over 16 years of age who have studied agronomy for at least a year was opened recently at Chinandega City, with an appropriation of $5,000 for its installation. It is equipped with up-to-date machinery and implements necessary for the proper cultivation of cereals and other crops, and makes a specialty of teaching its pupils the practical use and advantages of machinery in agricultural operations

The Government of Uruguay has granted 10 scholarships in its agricultural school to young Paraguayans who desire to continue their studies in Uruguay.

An executive decree in Uruguay places its agronomic stations under the immediate supervision and control of the Department of Fomento. At the suggestion of the park commission of Montevideo, a school for gardeners has been established in the national capital for the purpose of supplying special skilled labor of this kind.

School and Society announces that a Pan-American university has been established in the Republic of Panama. The trustees are to consist of the Secretary of Public Instruction of Panama and the diplomatic representatives of the American Republics or their delegates, together with similar representatives of other nations which may maintain chairs in the university. It is hoped that the institution may be of international value, especially along the lines of medicine, law, and agriculture.

In Venezuela, a presidential decree of March 12, 1917, creates an experimental station of agriculture and forestry, with an acclimatization garden, to be located near Caracas, and intended to serve as a model for other such stations to be established in other parts of the Republic. The objects of the station are the improvement of the methods of cultivation of the principal agricultural products of the country; the introduction, selection, and distribution of seeds; experiments in reforestation; the suitability of soils to crops and of crops to the various regions; and practical work for the training of agricultural foremen and forest rangers.

The Council of Public Instruction of Ecuador has arranged to establish an agricultural class connected with the faculty of science of Central University at Quito. The professor in charge of this course is also to edit an official bulletin to encourage the study of agriculture.

PHILIPPINE ISLANDS.

Beginning with the school year 1917–18, all schools where a course in farming is given are to be in session throughout the year. This is not entirely a new venture, as for several years all settlement farm schools and most agricultural schools have been in continuous session, and notwithstanding the younger pupils enrolled in them, these schools have maintained the best farms.

The calendar year has been divided into 42 weeks of classroom work, 4 weeks of special field practice, 4 weeks of vacation, and 1 week each for examinations and an annual cleaning up. Each pupil enrolled will be given a vacation of 4 weeks at the time in the year that the farm activities can best spare his services. All teachers assigned to farm schools are required to render service throughout the school year, except that short vacations may be given wher services can be spared.

It is believed that students should be detailed to definite p and thereby become factors in a productive enterprise. Eac is expected to do field work for not less than 4 consecutive (160 minutes) each day for 5 days a week, and daily field w to 3.5 hours may be required at the option of the principal. pupil is required to perform at least 3 hours of field work o other Saturday forenoon.

EDUCATIONAL WORK OF THE DEPARTMENT OF AGRICU

During the past two years extension education through spe has become prominent, both at the State agricultural colleges the Department of Agriculture. Both at the State agric college and in the Department of Agriculture are specialists i ous branches of agriculture who aid county agents in their and also give direct instruction to farmers in counties whe are no county agents. A specialist is generally an extensio who has a very thorough knowledge of some particular line o and who is efficient in presenting his subject to the county and the farmers. He may be differentiated from the county a that the county agent has to cover in a more or less thorough entire field of agriculture, whereas the specialist's field of generally limited to a narrow field, such as dairying, hortic poultry, etc.

The principal lines of extension work of this character bei ducted in the Department of Agriculture are hog-cholera wo and poultry clubs, dairying, and animal husbandry, through t reau of Animal Industry. All of this work is conducted in c tion with the agricultural colleges in the several States under agreements mutually entered into as a part of the general sys cooperation under the general memorandum of understandi tween the Secretary of Agriculture and the colleges of agricul

In hog-cholera work veterinary field agents have been app to cooperate with county agents and demonstrate to them local veterinarians and farmers the prevention of loss fro cholera and of the spread of the disease from herd to herd by t of the serum treatment and proper quarantine and sanitat premises.

In the dairy-extension work specialists are appointed to c work in the various States through county agents and other organizing cow-testing associations, bull associations, teachi keeping of herd records, planning the construction of silos, t modeling of dairy barns, milk houses, and other dairy buil establishing feeding demonstrations, management of herds, and special dairy-farm problems.

In soils, forestry, plant pathology, marketing and rural organization, etc., specialists are also employed to carry on extension work.

In addition to the fund provided for the regular cooperative agricultural extension work, Congress passed in 1917 the food-production act, which includes an item of $4,348,400 for increasing food production, eliminating waste, and promoting conservation of food, by educational and demonstrational methods through counties, districts, and urban agents, and others. Under the provision of this act over 1,600 emergency demonstration agents have been employed, and for the first time agents have been designated to take up work in the larger urban centers.

The enrollment in the South in boys' and girls' agricultural clubs increased in 1917 and now approximates 100,000 in the regular clubs. In addition to the regular enrollment, approximately 20,000 were enrolled to assist in meeting the emergency incidental to the war. A large number were enrolled in wheat clubs for 1918, wheat, rye, and oat clubs being organized wherever the growing of these crops was thought to be practicable.

Farm makers' clubs for negro children were organized during 1917 in several States. Much work has been done every year in these clubs among the negroes, but it was systematized as a separate project in 1916.

Pig and poultry clubs promoted in cooperation with the animal husbandry division of the Bureau of Animal Industry are very popular. Poultry clubs which consist largely of school pupils are usually organized in the schools through the direction of the county agents, the teachers serving as local leaders or supervisors of the work. Officers, including a president, vice president, and secretary are elected, meetings held as regularly as possible, and the work carried on in an educational and businesslike manner. The State poultry club agents or poultry specialists working under the supervision of the Animal Husbandry Division, Department of Agriculture, and the director of extension at the State agricultural college, visit these schools and deliver lectures on various subjects as well as give actual demonstrations on selecting, culling, killing, and dressing for market, and other phases of poultry work.

For the fiscal year ending November 1, 1917, 8 States, comprising 281 counties, were carrying on the work, representing 1,010 clubs and 13,664 members. Club members furnishing reports hatched, during 1917, 98,272 chicks and raised 80,310 mature fowls. They sold $17,908.25 worth of poultry and eggs for market and breeding purposes and the total value of their receipts, stock on hand, and prizes won amounted to $41,312.42. In addition to other school work, these poultry club members are becoming proficient in the selection and judging of standard-bred poultry, and also demonstrating their ability to carry on various phases of poultry work, such as operating incubators, preserving eggs, caponizing cockerels, killing and dressing fowls for market, etc.

Boys' and girls' pig clubs are also quite closely interwoven with the rural-school system. The pig clubs are usually organized around a school or community as a unit. The rural teachers are recognizing the value of pig clubs as a vitalizing factor in school work and are heartily supporting it. Many rural teachers are acting as local leaders, and swine extension workers visit the schools and give lectures, demonstrations, etc., on swine work.

The school pig is one phase of the pig club work in which the rural school is especially prominent. A great many rural schools have raised a pig on the school grounds, the pig usually being fed on the scraps from the children's dinner pails.

The progress made in boys' and girls' pig club work has been quite satisfactory. During the past year 35,980 members completed their pig club work, and there are now more than 100,000 boys and girls enrolled for this season's work. The average profit of the members fattening a pig was $11.38, and that of the members raising a sow and litter was $72.84. Seventy-one per cent of the members raising breeding stock had pure-bred animals. Pig club work is now carried on in 28 States.

During the year ending June 30, 1917, there were in the 33 Northern and Western States 1,124 paid leaders working in connection with the boys' and girls' club work. In addition to the paid leaders there were 9,748 volunteer club leaders. Two hundred and forty club leaders were paid cooperatively by the State and the United States Department of Agriculture, 133 by the State agricultural college and the local people, 18 by the college only, and 733 by the local people.

During the year ending June 30, 1917, there were in the 33 Northern and Western States a total enrollment of 406,633 members of regularly organized clubs. In addition to this about 400,000 boys and girls were enrolled in the war-emergency projects—growing gardens, canning food products, raising poultry, making war bread, and doing other things of a special character.

During the period from December 1, 1916, to April 1, 1917, 3,589 club members in the Northern and Western States attended the one or two weeks' short courses at the State agricultural colleges; 1,528 of these were champions of their respective counties in the boys' and girls' club work and were sent by the local people free of expense to attend the courses.

The division for agricultural instruction of the States Relations Service continued its project which had to do with the study of the methods of organization and administration of instruction in agriculture in public schools, the training of teachers for this work and the relationship of different agencies in promoting such instruction. Under this second project four additional conferences dealing with the problem of teacher training in land-grant colleges (making seven in all) have been held. The aim of these conferences held both in the North and the South was to work out a tentative course which may be taken as a guide for training teachers in agriculture and to cooperate the various forces and agencies which would promote agricultural education.

This divison has continued its work in the preparation of courses of study for teachers of elementary agriculture in cooperation with State agricultural colleges, experiment stations, and State departments of education. Bulletins have been prepared and published for the schools of Virginia and Ohio. Similar courses have been prepared for Vermont. In addition to these bulletins others have been issued dealing with the elementary school courses in agriculture; among the recent ones are Lessons on Tomatoes for Rural Schools, Lessons in Poultry for Rural Schools, Lessons on Pork Production for Rural Schools, Lessons in Dairying for Rural Schools.

The publication of the Agricultural Education Monthly has been discontinued and in its place have been issued a series of documents dealing with various phases of secondary instruction in agriculture.

A series of leaflets on how teachers may use Farmers' Bulletins have been prepared. Twenty-one in all have beeen prepared, of which 18 have been published.

The beginning of the administration of the Smith-Hughes act has brought demands for a large amount of service which has not been in printed or multigraphed form. A memorandum of cooperation between the Federal Board for Vocational Education, the Bureau of Education of the Department of the Interior, and this bureau contemplates a series of investigations under the Smith-Hughes Act, a part of which shall be conducted by the division of agricultural instruction. The committee representing this cooperative work has already begun the plans for such studies. A bulletin on the home project as a phase of vocational agriculture has been prepared by this division at the request of the Federal Board for Vocational Education and submitted to the board for publication.

This division has made an extensive study of the problems of visual instruction in agricultural education and has completed a series of lantern-slide lecture sets dealing with various phases of agricultural education. Among those more recently added to the list are How to Teach Poultry Lessons in Elementary Schools, Lessons on Tomatoes for Rural Schools, and Teaching Garden Practice.

Plans have been developed by means of which illustrative material of various types may be made more available to schools in the several States, especially to help State officers prepare duplicates of our material.

The literature on agricultural education has been reviewed and abstracted by this office. Card indexes of the world's literature of agricultural education, as well as American and foreign institutions for agricultural education and home economics, were maintained by the division.

THE AGRICULTURAL COLLEGES.

The declaration of a state of war in April, 1917, profoundly affected our system of higher education in agriculture almost immediately. Attendance, which in most land-grant colleges had been steadily rising from year to year was suddenly depleted as the call came for one form or another of national service. Some institutions closed their doors early in May and in others the work went on under greatly changed conditions.

In response to an inquiry from the Secretary of the Interior as to the duty of the land-grant colleges and technical schools during the war, the situation was admirably stated by President Wilson in a letter of July 20, 1917, as follows:

> The question which you have brought to my attention is one of the very greatest moment. It would, as you suggest, seriously impair America's prospects of success in this war if the supply of highly trained men were unnecessarily diminished. There will be need for a larger number of persons expert in the various fields of applied science than ever before. Such persons will be needed both during the war and after its close. I therefore have no hesitation in urging colleges and technical schools to endeavor to maintain their courses as far as possible on the usual basis. There will be many young men from these institutions who will serve in the armed forces of the country. Those who fall below the age of selective conscription and who do not enlist may feel that by pursuing their courses with earnestness and diligence they also are preparing themselves for valuable service to the Nation. I would particularly urge upon the young people who are leaving our high schools that as many of them as can do so avail themselves this year of the opportunities offered by the colleges and technical schools, to the end that the country may not lack an adequate supply of trained men and women.

It will be noted that in this statement particular stress is laid upon the need for men trained in applied science. In this group will be included, of course, the graduates of the agricultural colleges. In view of the important and unique functions which these institutions have to fulfill, and the realization that in some ways the conditions regarding their prospective attendance differed from those in other institutions, it was deemed of general interest to ascertain, after their reopening in the fall of 1917, how they had fared as regards enrollment. A general survey of the existing situation showed that the average decrease for the institutions reporting was slightly over 30 per cent and in numerous cases exceeded 50 per cent. Some sectional variation was noticeable, several southeastern colleges maintaining their previous registration and others falling only slightly below it, while losses were exceptionally heavy in the Southwest and in the Middle West.

On the other hand, the average decrease in mechanic arts was approximately only 15 per cent and did not exceed 36 per cent for any institution.

Analysis of the registration by classes in the agricultural colleges revealed heavy losses at every stage. As would be expected, the senior class was largely effected, decreases from 40 to 60 per cent being not uncommon.

The depletion of the junior and sophomore ranks was found to be somewhat smaller in most institutions.

The entering classes, however, present a special problem for consideration. Before the war steadily increasing numbers of freshmen, in many cases taxing the capacity of the college, had been the rule, but in the fall of 1917, 36 institutions reported losses ranging from 8 to 60 per cent. The Texas College reported an increase of over 12 per cent, resulting in the largest class in its history, and four others showed smaller gains, but the average for the entire group was a loss of about 25 per cent.

Expressed not in percentages, but in actual numbers, the data are even more striking. For the institutions available the freshmen aggregated in 1916, 4,630, and in 1917 only 3,463. This means a decrease of 1,167 freshmen students in agriculture in the 41 States reporting this item.

Another problem before the land-grant colleges to-day is the provision of special courses to meet the emergency needs. Thus, as regards the training of teachers, at the outbreak of the war there were upwards of 1,000 college trained young men teaching agriculture in schools below college grade, the number has now been seriously depleted, while the development of work under the Smith-Hughes Act alone has created a demand for several hundred additional instructors with such training. It is suggested that the colleges can do much to " prevent the serious lowering of standards by increasing their facilities for training undergraduates for the teaching profession, by conducting emergency courses for teachers now in service, and by the intensive training along agricultural lines of college graduates in arts and science courses."

Emergency short courses in agriculture have already been offered by a number of institutions and their further development seems logical.

The committee on instruction in agriculture of the Association of American Agricultural Colleges and Experiment Stations was of the opinion that not within a decade " has there been a time so favorable for giving serious attention to measures for improving the quality of teaching in the colleges themselves as the present war emergency affords."

If the reduction in enrollment of agricultural students by nearly one-third seems discouraging, it is well to reflect that in England wholesale losses of faculties and students have occurred, that several institutions have closed their doors, and that others have been very seriously restricted in their operations. In our own country no such developments are expected and often the enrollment is far in excess of that of a few years ago. When the importance of trained agricultural leadership becomes thoroughly realized, particularly in its relations to the existing emergency, there need be little doubt that the agricultural colleges, as the training ground for such leadership, will receive and retain the full support in every direction which they will need for this vital service.

BUILDINGS.

The new Hilgard Hall at the University of California is an elaborate four-story structure, of reinforced concrete, 60 by 300 feet, costing with equipment about $370,000, and constituting the second of the three buildings which will complete the agricultural quadrangle. It will serve as the headquarters of the college of agriculture, housing the departments of agronomy, citriculture, forestry, genetics, pomology, soil technology, and viticulture.

The new animal-husbandry laboratory at the Iowa State Agricultural College has been completed. It is a one-story building 74 by 112 feet, costing about $50,000. It has been devised especially for work in connection with the slaughtering, dressing, cutting, and curing of meats. The basement contains a 10-ton refrigerating plant, coolers, a smokehouse, refining, sausage, lard, and other by-product rooms, offices, etc. The main floor can be divided into three distinct rooms, or used as a whole for demonstration work.

The new beef-cattle barn at the University of Minnesota, to replace the structure burned, is practically completed. It is 60 by 120 feet with a wing 36 by 120 feet. The portion to be used as a stable is built of hollow tiles with reinforced concrete. Two hollow-tile silos adjoin the stable, and the wing contains a laboratory for class work and demonstration. The total cost is about $25,000.

A two-story institute hall has been completed at the Duluth substation. The first floor contains an auditorium and office space, and the second dormitory accommodations, a kitchen, and a dining room. The new equipment will make possible the holding of community gatherings at the substation, as well as afford a meeting place for various farm organizations of northeastern Minnesota.

Wolf Hall, the new $280,000 building at Delaware College, will house all the activities of the agricultural department and temporarily the college departments of chemistry and biology.

Plans have been approved by the building committee for the new agricultural building at the Maryland State Agricultural College. The legislature has appropriated $175,000 for the construction of this building, which will be a three-story and basement structure with a front wing 200 by 68 feet connected with an inclosed bridge with an auditorium seating about 1,000 people and this in turn connected with a rear wing with the same dimensions as the front.

A plant for the curing and drying of meat is to be erected on the New Jersey State Agricultural College farm. The structure will consist of two fireproof and two waterproof compartments, one to be used for the slaughtering of animals and the other for the curing and storing of meat. There will also be a small compartment for smoking meats. This plant will provide facilities for instructing students in the long and short courses in agriculture in home butchering, which will be given due attention as a part of the campaign for the conservation of foodstuffs.

Substantial progress is being made in the construction of a new $100,000 administration building, auditorium, and museum at the New York State College of Agriculture.

The Oklahoma Agricultural College and station has recently completed a modern two-story grain storage house. The upper story will be used for laboratory work in plant breeding, seed selection, etc. The lower floor has six rooms, three of them designed for storage rooms for small grains and equipped with special appliances for fumigation, and the remainder are designed for a general receiving and work room, a machine room for the graders, ginners, etc., and a general storage room, respectively.

APPROPRIATIONS.

A State appropriation in Alabama of $100 per annum for the years 1915–1918, inclusive, is now available for each county that raises a similar sum to be used for prizes, premiums, and other phases of boys' and girls' club work. These funds are spent under the joint supervision of the State board of agriculture and the county authorities under plans and rules submitted by the professor of school agriculture of the Alabama Polytechnic Institute.

The Arkansas Legislature for 1917 appropriated $481,000 for the ensuing biennium for the divisions of liberal arts, agriculture, engineering, and education. This is an increase of approximately 50 per cent over any previous appropriation.

The Connecticut General Assembly of 1917 appropriated $28.000 for the construction of a central heating plant at the State agricultural college, and added $2,500 per year to the maintenance appropriation of the station. Other appropriations for the biennium included $12,000 for the State entomologist, $40,000 for the suppression of gipsy and brown-tail moths and nursery inspection, and $15,000 for the control of white pine blister rust.

A law passed by the Montana Legislature in 1917 appropriated $10,000 for the reimbursement of the cost of transportation to and from their homes of students at the State agricultural college, the State university, the State school of mines, and the State normal college. The purpose of the act is to equalize the cost of attendance at these institutions to students coming from distant parts of the State.

The Delaware Legislature appropriated in 1917 a total of $285,890.27 to the State agricultural college for the ensuing biennium. Among the items authorized were $125,000 for the new dormitory at the women's college, $32,000 per annum for the maintenance of that college, $32,000 for a new heating plant, $10,000 per annum for the maintenance of the agricultural department, $7,890.27 for agricultural extension. Gifts made to the college from an unannounced donor during 1916 amounted to $1,000,000 and are being utilized largely for buildings.

The Kansas Legislature for 1917 appropriated to the State agricultural college $80,000 for the purchase of land to be used for animal husbandary, dairy, and poultry farms, and $50,000 for an addition to the agricultural building.

The Massachusetts Legislature for 1917 appropriated to the State agricultural college $40,000 to enlarge the power plant, $33,000 additional for new equipment, and $10,000 for maintenance and improvement of the market garden substation at Lexington.

In 1917 the New York State Legislature appropriated $779,401 for the State agricultural college for the ensuing year, in addition to an earlier emergency grant of $55,910 for the present year and $42,000 for printing.

A bill appropriating 125,000 pesos ($62,500) for the establishment of an experiment station in connection with the college of agriculture, was passed by the Philippine House of Representatives at its 1917 legislature.

The Porto Rico Legislature at its last session appropriated $1,000,000 for aid in the growing of food crops. In 1917 about 40 rural teachers were engaged in all sections of the island.

A bond issue of $1,000,000 was authorized by the Tennessee State Legislature in 1917 for buildings and other improvements by the State university, supplemented by the proceeds of the half-mill tax, estimated to produce about $336,000 per annum at present and to be used for maintenance. About $100,000 may be used for the construction of buildings at a substation in middle Tennessee.

The Texas Legislature for 1917 established the West Texas Agricultural and Mechanical College on a grade coordinate with the existing institution at College Station, as well as a junior college located elsewhere to give two years of high-school agriculture and two years corresponding to the freshman and sophomore years of college work. Provision has also been made by the legislature for establishing a third junior agricultural college to be known as the Northeast Texas Agricultural College. An appropriation of $250,000 has been made for its establishment and maintenance. Special appropriations were made for the station and substations, aggregating $225,095.34 for the year beginning September 1, 1917, and $181,270.40 for the following year.

The 1917 legislature of West Virginia granted an additional $75,000 for the agricultural building. The legislature also appropriated $20,000 for buildings on the new farms.

EXTENSION AND SHORT COURSES.

Special instruction courses for extension workers were held in December at the University of Arkansas, and a course specially designed to meet the needs of home demonstration agents, including English, gardening, dairying, rural sociology, poultry work, rural social engineering, household conveniences, rural recreation, sanitation, home nursing, care of infants, etc., from January 7 to February 2, 1918.

Four-year professional courses in forestry and forest engineering have recently been established at the University of California. A 12-weeks short course was also given, begining January 15, 1917, to help practical woodsmen. The work included theoretical training in surveying, log scaling, timber estimating, logging, fire protection, silverculture, forest administration, trail and telephone construction, English composition, grazing, and the work of the United States Forest Service.

A feature of the annual short course in January at the Georgia State Agricultural College was the food-conservation school for farm women. County demonstration and home economics agents who have recently taken up work in the extension departments were also present at these courses.

A four-weeks course in dairying has been offered at Purdue University to women preparing themselves to fill positions in factories manufacturing dairy products. This course included the testing of milk and dairy products, the making of soft cheese and ice cream, dairy bacteriology, general dairying, and lectures on food production.

A special short course was arranged at the Iowa State Agricultural College in November, 1917. This course included instruction in agriculture, home economics, engineering, and industrial science, and was open to young people who have not yet completed high-school work as well as to those prepared for full collegiate instruction.

Evening courses in various branches of agriculture were offered in 1917 at the Maryland State Agricultural College. These courses included special work in beekeeping, poultry raising, and fruit growing for suburban residents of Washington, D. C. College credit was given for these courses so far as practicable, with a system of certificates showing all work completed.

The Annual Farmers' Convention, held at the North Carolina Agricultural College and Station, in August, 1916, under the auspices of the college, station, and extension workers, was one of the most successful meetings of its kind yet held in the State. About 3,000 men and 2,000 women were in attendance. The special subject of the meeting was rural education, which was graphically presented by means of an exhibition in which several booths were grouped around a larger booth in one of the college buildings. The smaller booths represented the activities of the station and extension service, while the larger booth represented a consolidated or farm-life school.

A school of education has been organized at the North Dakota State Agricultural College with four courses covering four years and two courses covering two years for completion. The four-year curricula are designed for teachers of agriculture, the mechanic arts, science, and vocational and rural school administration, while the two-year curricula are for teachers in consolidated schools and special teachers.

THE GRADUATE SCHOOL OF AGRICULTURE.

The seventh session of the Graduate School of Agriculture, under the auspices of the Association of American Agricultural Colleges and Experiment Stations, was held July 3–28, 1916, at the Massachusetts Agricultural College. The attempt was made to develop a more systematically organized plan of work at this session than had hitherto been undertaken. This plan involved work in two main lines. One of these included progressive consideration of the fundamental factors involved in the growth of plants and animals. The other dealt with the economic and social factors which enter into the development of profitable systems of agriculture and well-organized rural communities.

At its public opening exercises the school was welcomed to the Massachusetts Agricultural College by President K. L. Butterfield, and the granges of New England were represented by Rev. J. H. Hoyt. Dean A. C. True, of the graduate school, outlined briefly the objects for which the school was established, the reasons for the particular courses of instruction offered at the seventh session, and the intellectual and social advantages to be derived from the contact of instructors and students in such a school.

Dr. True pointed out that in our time—

> education and research more and more involve the harmonious working together of groups of individuals who are willing to put away selfish ends for

the common good. In a vast country like our own with a population drawn from all quarters of the globe, and with an almost infinite variety of environmental conditions, associations of scholars and investigators from many different regions, whether their work deals with subjects remote from practical affairs or, as in the case of most of us, with matters of vital concern to great industries, is of great importance as an aid to that mutual understanding on which the life of our Nation and the perfecting of our civilization depend. For after all, as recent events in the world's history have shown, public opinion and governmental action depend more largely than is generally recognized on the modes of thought which are developed in the institutions of higher learning.

Such an organization as this graduate school, having behind it the associated universities and colleges represented in the Association of American Agricultural Colleges and Experiment Stations, may also be influential in shaping the ideals and standards of agricultural scholarship and research. If through our discussions here we are able to carry back to our respective institutions suggestions for the improvement of courses of instruction and methods of research and to stimulate faculties and students to more thorough work, we shall have made a valuable contribution to those influences which are to determine the success of the great movement to raise American agriculture and country life to the highest possible level.

Since the last session of our school this movement has made unusually rapid progress. The permanent national system of agricultural extension education, provided for in the Smith-Lever Act of 1914, has already become well organized and attained great dimensions. In over 1,200 counties, spread over the entire country, extension agents are regularly working. Supporting these local forces are about 1,500 extension specialists and administrative officers maintained by the State colleges and the Department of Agriculture. At least 1,000 teachers are giving instruction in agricultural subjects in our colleges, and the number of students in four-year courses of agriculture has risen from 14,000 in 1913 to 19,500 in 1915. The past year 4,900 secondary schools gave agricultural courses attended by 95,000 students, as compared with 1,400 schools and 30,000 students two years before. The force employed in our agricultural experiment stations has risen to 1,860 and the income of the stations in 1915 was $5,286,000. The force employed in the Department of Agriculture is over 16,000 and its income about $25,000,000.

The demand for thoroughly trained and efficient workers in agricultural lines, whether in research, education, or farm practice, has never before run so far beyond the supply. The responsibilities of the leaders in the agricultural movement have never been so heavy. Their encouragements have never been so great. This body of young men, who have already been trained in our higher institutions of learning and many of whom are already engaged in teaching or research, have before them exceptional opportunities for leadership and high success. The incentives to thorough preparation and the most strenuous endeavor are of the highest and broadest character. To discover nature's secrets and thereby advance science and human welfare, to inspire and instruct a vast multitude of men, women, and children in colleges, schools, and millions of homes, to lay a firm and safe foundation for the permanent existence and prosperity of the United States and in large measure of all the world—these are the appropriate tasks of agricultural scholars and scientists.

A week was devoted to discussions of the problems of education with special reference to the training of students along agricultural lines. Dr. W. C. Bagley, director of the school of education of the University of Illinois, gave five lectures on the foundations of pedagogy. He argued that not only knowledge but "skill" is a legitimate and important end of education, whether the subject taught is what is ordinarily called cultural, such as language and mathematics, or technical, as engineering and agriculture. The interrelations of technical and cultural aims in education were also dwelt upon. A clear and impartial résumé of the experimental researches on the disciplinary value of various studies was given, with the conclusion that the evidence thus far accumulated indicates that there is a certain disciplinary result which may be transferred from one study to another, but that this is not so large as has been commonly held by the friends of the old classical education.

Dean W. W. Charters, of the school of education of the University of Missouri, presented some of the principles on which methods of teaching should rest. He laid special stress on the principle that the normal mental process in learning is to work from problems toward their solution. A problem arising in the experience of the student or being presented to him by his teacher, the learner may become in large degree his own instructor, especially if the solution is of vital interest to him. The application of this principle would in many subjects result in economy of mental effort, increase of interest, and more permanent results. Good method should always culminate in elaborated and well-organized knowledge.

At the seminars the practices of teaching various agricultural subjects were presented by Dean R. L. Watts, of Pennsylvania State College, on vegetable gardening; Prof. C. G. Woodbury, of Purdue University, on pomology; Prof. C. A. Zavitz, of Ontario Agricultural College, on agronomy; and Prof. J. E. Rice, of Cornell University, on poultry husbandry, as well as by members of the Massachusetts College faculty and others. On Saturday a conference on the training of men for agricultural service was led by President H. J. Waters, of the Kansas Agricultural College, who dwelt on the nature and function of the college course in its adaptation to this end, and by Prof. G. A. Works, of Cornell University, who discussed the relation of the agricultural college to the preparation of teachers of agriculture in secondary schools.

The conference was followed by a round-table discussion by teachers of secondary agriculture on the value of the college courses in agricultural education as a means of preparation for teaching agriculture, this meeting being one of the series of conferences held during the past year through the cooperation of the United States Bureau of Education and the States Relations Service. During this educational week emphasis was often laid on the importance of training in the principles and methods of education for students intending to become teachers of agricultural subjects in colleges or schools.

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EDUCATIONAL SURVEYS

BY

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[Advance sheets from the Biennial Survey of Education in the United States, 1916–1918]

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EDUCATIONAL SURVEYS.[1]

By Edward Franklin Buchner,

Professor of Education, Johns Hopkins University.

CONTENTS.—State surveys—County surveys—"Town" surveys—City surveys—Vocational education surveys—Higher educational institutions—Negro education—Foreign surveys—Miscellaneous—Unpublished surveys.

The educational survey has ceased to be a mere event or an occasional happening. It has been critically transformed into a permanent means of progress. Changes in the educational conditions of a given system are now to be expected not merely from the initiative and push within, but are actively sought for as the outcome of an objective and unbiased study of the situation. The establishment of standards based on current practices and the more exact definition of the relations which should obtain in the dynamics of educational support and organization, of teaching and learning, have made possible the increasing number of scientific approaches to the task of formulating qualitative and quantitative judgments concerning communities and their schools. The system of schools set up and maintained by a State, county, or city is a most important form of human behavior, and therefore worthy of the intensive study essentially characteristic of a survey. The synthetic judgment in which the study culminates, prophetic of vital readjustments to be made, is possible only to the survey whose scientific acumen is guided by a fertile imagination drawing from the now rich stores of ranks, standards, and measurements possessing both accuracy and applicability.

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[1] This chapter is the fourth report in the special series presenting a record of the educational-survey movement. In the report of the Commissioner of Education for the year ended June 30, 1914 (Ch. XXIV, vol. 1, pp. 513–562), and also June 30, 1915 (Ch. XVIII, vol. 1, pp. 438–492), appeared the first two reports of school surveys in the United States. The educational inquiries and surveys, the reports of which, with two exceptions, had been published up to the close of each of the two years, respectively, were analyzed with reference to the place and time, the authorization, the details of the staff, the situation leading to the inquiry, the method and scope, and the fundamental problems investigated, with a summary of the more important findings and the recommendations.

The third report, appearing in the report of the Commissioner of Education for the year ended June 30, 1916 (Ch. XXI, vol. 1, pp. 353–371), included those surveys of which the reports had been published during the year under review or were in process of publication, and listed those surveys the reports of which remained unpublished. This fourth report presents an account of the surveys which have been published during the biennum 1916–1918 or are in process of publication, listing those which may not be published.

The permanency of the survey as an American means of educational progress is clearly shown by the greatly increased number made during the biennium of 1916–1918, which this report reviews. Of the 157 surveys (including 7, the reports of which are unpublished) made during the past seven years, 73, or 47 per cent, were made during the last two years. The 147 published reports present the results of extensive, or special, studies of districts, in whole or in part, thus distributed: United States, 1; States, 18; counties and "towns," 40 (reporting on conditions obtaining in 67, 3 counties in one instance being "typical" of a State); cities, 59; higher institutions, 10 (covering 24 institutions); vocational, 13; and special, 6. The average number of surveys per year made during the entire period is 22. During the biennium the annual average is over 36. The 69 survey reports published (or in press) during these two years show in their distribution a steady widening of the field of application: State, 8; county and "town," 24 (reporting conditions prevailing in 49); city, 22; higher institutions, 5; vocational, 6; and special, 4.

The survey continues to extend its services in general, ranging from an almost complete reorganization of a system to the easing of a local "situation"; and in particular, such as showing the limitations of the school plant and furnishing a building program for several years to come, specifying costs of operation and instruction and revealing untouched financial resources, discovering the attainments of pupils in classes, buildings, and districts, and thus pointing out new functions in the field of supervision, extending more exact inquiry to include additional subjects as music, drawing, and school gardening, and formulating the teaching norms characteristic of a city, county, or State. The survey has more than "paid for itself" by showing that we can not cheapen education. It has become an effective means for the explanation and the preparation of a supporting community for the rapidly and inevitably increasing costs of public education (e. g., the bond issues of St. Louis, St. Paul, and Harrisburg). A most striking feature of the survey changes in the biennium is to be found in the adoption of some of its distinctive methods by superintendents, particularly of city schools, in their annual reports or special publications. This form of "auto" surveying at once disseminates in the community more accurate and intelligent information concerning schools, and places a new interpretation upon the meaning of educational administration in practice. Important increments to our scientific knowledge of educational processes and results are being made through the greater attention given to the measurement of the achievements of pupils by the inclusion of standard scales and tests. What can we tell about a school system having exact information about this, that, or another trait, is a question the survey has enabled us to answer with increasing certainty. The duty of comprehending the educational survey is thus laid alike upon the public, both parent and taxpayer, the practitioner, and the student of education, for it has ceased to be a mere event or an occasional happening.

In connection with these general features and before taking up the details of survey activities during the biennium, it should be noted that a view of the special significance of the educational survey as a means of progress and of the activity of the Bureau of Education in forwarding this movement by extensive participation therein is set forth in the report of the Commissioner of Education for the year ended June 30, 1917 (Vol. I, Chap. II, pp. 19–44). It is important to observe how legitimately the educational survey has fitted in with the conditions of national progress as previsioned in the congressional legislation half a century ago. The Commissioner of Education thus calls attention to this situation, as a preface to the extended summaries of several important surveys conducted by the bureau which are included in this account of its varied activities during 1916–17:

> In its educational survey work the Bureau of Education is carrying out in the most direct manner possible the task contemplated in the original act [1867] creating the bureau. * * * It is precisely this function that the educational survey fulfills. * * * It is becoming more and more evident that the educational survey constitutes a type of service most appropriately rendered by the Federal Bureau of Education.

STATE SURVEYS.

Illinois.[1]—This survey presents most of the results of a State-wide survey growing out of a resolution passed by the Illinois State Teachers' Association in 1913. After a period of conferences and committee organization, it was decided to investigate "the children; the teachers; the program of studies; the school plant; finances; organization, administration, and supervision; the school and the community; conditions affecting vocational education; and the rural schools," with a special investigator in charge of each division. "It was not possible to present complete and detailed reports upon all of these topics, partly because the investigators were not free to secure the information at first hand and partly because of limited resources." "The committee was handicapped not only by a lack of funds, but by the failure of certain agencies to cooperate with the movement and by the unfriendly attitude of certain members of the teaching force." The method of securing information employed the questionnaire extensively, with the visitation of a total of 173 rural schools by three investigators.

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[1] Illinois School Survey: A Cooperative Investigation of School Conditions and School Efficiency, Initiated and Conducted by the Teachers of Illinois in the Interest of All the Children of All the People. By L. D. Coffman, director. 877 pp. Published by order of The Illinois State Teachers' Association, 1917.

The report of the Illinois school survey, accordingly, includes 11 reports on the following specific topics:

The economic status of teachers in Illinois, by L. D. Coffman.
Program of studies in town and city graded elementary schools, by W. C. Bagley.
The technique of superintendence, by L. D. Coffman.
School finances, by David Felmley.
Student population and related problems in high schools, by J. A. Clement.
Spelling scores for 54 Illinois cities, by J. F. Bobbitt.
Arithmetic scores in seven Illinois cities, by J. F. Bobbitt.
Some exceptional high-school pupils in Illinois, by E. E. Jones.
The rural schools: Reports by Caroline Grote, Edgar Packard, and Joseph H. Hill.

Alabama.—The 1915 session of the Legislature of Alabama authorized the submission to the qualified electors of the State, to be held in November, 1916, of an amendment to the constitution permitting the several counties in the several districts of any county to levy and collect a special tax not exceeding 30 cents on each $100 worth of taxable property for school purposes. The department of education of the State, accordingly, undertook a special study of educational conditions which would enable the voters to act in the light of knowledge when voting upon the proposed amendment. It issued in July, 1916, "A Comparative Study of the Public School Systems in Alabama and Other Typical States and an Exhibition of Educational Conditions in the 67 Counties of Alabama." (Bulletin No. 55, 32 pp.) The States chosen for comparative purposes included Florida, Georgia, Massachusetts, Mississippi, Ohio, Tennessee, and Washington, the data being derived from the report of the Commissioner of Education for 1914. The study of conditions in the several counties in the State related only to whites, including both rural and city districts. The special topics presented include: Children in school and out; length of school year and average attendance; average annual expenditure per pupil enrolled; teachers and teachers' salaries; average number of pupils per teacher; grades of certificates; investment in school plant; and illiteracy in Alabama. The entire material of the bulletin is organized after the pattern of "A Comparative Study of Public School Systems in the 48 States," issued by the Russell Sage Foundation in 1912.

Colorado.—The "Report of an Inquiry into the Administration and Support of the Colorado School System made under the Direction of the United States Commissioner of Education" was issued as Bulletin, 1917, No. 5 (93 pp., 48 tables). The scope of this study, which was made upon the request of the Colorado State Survey Committee, "was confined to an investigation of the administration and support of public elementary and secondary schools and their immediate effects upon conditions determining the character of work done in these schools." The inquiry was made by A. C. Monahan and Katherine M. Cook, both of the Bureau of Education, who were in the State during a considerable time in the months of September, October, and November, 1916. The detailed topics taken into consideration include the State of Colorado and its educational system, general administration, revenue and support, and the administration of school instruction. Chapter II presents a summary of the 25 recommendations made to meet "Colorado's greatest need in public education" which was found to be "a type of centralized organization, now wholly lacking, which would furnish the leadership and guidance necessary to insure State-wide progress."

Arizona.—Because of its recent admission to statehood and the formative stage through which its educational development is passing, especial interest attaches to the study of "Educational Conditions in Arizona: Report of a Survey by the United States Bureau of Education," and issued as Bulletin, 1917, No. 44 (196 pp., 86 tables, and 15 plates). The inauguration of the movement leading to the survey was made by the Arizona School Officials' Association early in 1915. Toward the close of this year, the State superintendent of public instruction requested the Bureau of Education to conduct the survey, which was begun in the autumn of 1916. The members of the bureau assigned to the study included A. C. Monahan, J. C. Muerman, Katherine M. Cook, W. S. Deffenbaugh, F. B. Dresslar, H. W. Foght, and Samuel P. Capen. The study made of the State university was assisted by Livingston Farrand. In addition, assistance was rendered by State and educational officers, and questionnaire returns from 81 per cent of the teachers and several hundred other citizens in the State.

The topics presented in the report include the State of Arizona and its educational system, the status of elementary and secondary education, the State normal school and the department of education in the State university. Chapter II, which deals with secondary and elementary education, comprises about two-thirds of the report and presents considerations of State administration, county and district administration, revenue and support, urban school districts, high schools, elementary school attendance, and instruction. The problems involved in the supply of teachers were the chief feature of the study made of the State normal school and the department of education in the State university.

The 10 groups of recommendations for the improvement of educational conditions in the State are:

1. Centralization of the State school system, placing the responsibility of the administration of the public-school system definitely upon the State board of education and the State department of education working in cooperation with the county boards of education and school-district trustees.

2. Reorganization of the State board of education, conferring upon it enlarged powers.

3. Provision for a nonpolitical State superintendent who shall be the head of an enlarged and more effective State department of education.

4. Provision for county control of county school funds through county boards of education and nonpolitical county superintendents.

5. Reorganization of the method of apportioning State funds on a basis which recognizes county and local effort.

6. Requirement of a higher standard of general and professional education for teachers, a revision of the method of certification, establishment of a certification division in the State department of education, which shall be also a teachers' employment bureau.

7. Means to encourage the erection of suitable school buildings and to prevent the erection of undesirable ones.

8. Rearranged course of study especially to meet the conditions in the one-teacher schools.

9. Provision for expert supervision of rural schools.

10. Reorganization of the method of handling State textbooks to prevent unnecessary losses.

South Dakota.—A complete scheme for the reorganization of the system of public education in South Dakota, in order to bring its administration into conformity with the best current practice, to secure a more effective unification of the schools and higher institutions, and to eliminate various disturbing political factors, is presented in the recommendations of the report made by the State educational survey commission announced in June, 1918. The commission was appointed by the governor in accordance with the act of the legislature in 1917, appropriation having been made to meet the expenses of the study. The inquiry was conducted under the direction of the Commissioner of Education, the field work and preparation of the report being in charge of Harold W. Foght.

The report, which will be published as a bulletin by the Bureau of Education, includes these topics: The topography of South Dakota; economic conditions; the kind of schools best adapted to an agricultural people; the present system of education; rural elementary and high schools; town and city elementary and high schools; State, county, and rural school organization and administration; supervision of city, town, and county schools; the preparation and certification of teachers, and teacher training in the several public and denominational institutions; the State university; the State college of agriculture; the State school of mines.

Chapter XXI presents a summary of the most important legislative and administrative recommendations offered, among which are the following: (1) Constitutional amendments enlarging the powers and duties of the present State board of regents so as to unify the system and to secure the election by this board of the State superintendent of public instruction; (2) reorganization of rural schools so as to reduce to a minimum the number of one-teacher schools and to increase the number of consolidated and rural high schools, to secure enlarged school plants, homes for teachers, and a more permanent staff of teachers receiving more adequate salaries, and, to readjust the school year in conformity with the growing season and the occupational interests of communities; (3) reorganization of school districts outside of present independent town and city districts into the county-unit system, with county boards of education having specified powers and duties, including levying a uniform county school tax and equalizing educational advantages among all school children in the county; (4) the provision, new for South Dakota, for a State school tax amounting to about one-third of the total school maintenance, and also a permanent millage tax for the support of the higher institutions in lieu of present legislative appropriations; (5) the improvement of teachers' qualifications and teaching conditions.

Iowa.—The novel attempt to discover and formulate State norms in the attainments in certain subjects by children under instruction in public schools is exemplified by the two following monographs: "Handwriting of Iowa School Children," by Ernest J. Ashbaugh, University of Iowa, Extension Division Bulletin No. 15, March 1, 1916 (24 pp., 10 tables, 6 figs., 4 graphs); and "The Arithmetical Skill of Iowa School Children," by Ernest J. Ashbaugh, University of Iowa, Extension Division Bulletin No. 24, November 1, 1916 (63 pp., 17 tables, 31 figs.).

The first study attempts to answer these questions:

1. How well do Iowa school children write?
2. Do children improve their quality of writing regularly as they progress through the grades?
3. Do children attending school in towns and cities write better than those attending the rural schools?
4. Do the children in the larger cities write better than those in towns or small cities?
5. How do children in this State compare with children in other States?
6. Is the quality of writing of the average eighth-grade child sufficient to satisfy the ordinary demands of everyday life outside of school?

The data on basis of which the answers could be formulated were secured during the school year 1914–15, being a total of 28,000 papers received from 110 cities and towns and from rural schools in 14 counties. The scoring of the papers was based on Ayres's measuring scale for handwriting. In general, it was found that, "on the average, Iowa children are writing as well as children of like grade elsewhere in the United States and at a greater speed, with the exception of the eighth grade, which is only a little slower."

The second study attempts to secure answers to these questions:

1. How skillful are Iowa school children in performing the four fundamental operations in arithmetic?
2. How does the skill of Iowa school children compare with that of children of like grade in other States?
3. How does the skill of children in small towns compare with that of children in larger towns and cities?
4. What use can be made of standard tests?

The data were secured by the extension division of the university, through whom arrangements were made for the giving of the Courtis Series B tests during the last two weeks of the school year 1915–16. Papers were secured from about 13,000 pupils in 52 cities and towns, the teachers checking the papers and recording the number of "attempts" and "rights." Class-record sheets, which were accepted as accurate, were then handled by the extension division in order to secure the information sought by the four questions. It was found that the speed is greater in the lower grades than in the upper, and the accuracy may be improved in most grades, especially in addition and multiplication. In comparison with the children of Indiana, Kansas, and Minnesota and the Courtis general scores, Iowa children excel in most grades and operations. The study seems to throw "some light on the justice of the criticism" which specifies the inaccuracy in arithmetical ability on the part of children who complete the common-school course.

In "Vocational Guidance in Music," by Carl E. Seashore (University of Iowa Monographs, First Series No. 2, September, 1916, 11 pp.), announcement is made of the provision in the psychology of music studio for the conduct of music surveys in the public schools. This development of grade tests in music for vocational guidance represents additional equipment for school survey purposes.

Wisconsin.—A contribution toward the improvement of teaching in public schools, as well as the formulation of a measure of the success of the instruction given and representative of the practices characteristic of the State, is presented in "A Report on the Use of Some Standard Tests for 1916–17," by W. W. Theisen, and issued by C. P. Cary (Studies in Educational Measurements in Wisconsin, Bulletin No. 1, 1918, Madison, pp. 120, 45 tables and 9 figures).

These "tentative Wisconsin standards of achievements" in spelling, arithmetic, handwriting, composition, and reading were derived from an extended plan of cooperative research, aided by members of the State department of education, city and county superintendents and teachers, under the direction of the State supervisor of educational measurements. In addition to the pupils' work, the study sought by questionnaires certain facts as to the course of study and organization of instruction in the subjects tested in order to find possible correlative explanations of the results obtained in some of the tests.

The spelling of 36,564 pupils in rural, " State graded," and high and city schools was tested by the Ayres scale, and found " to be from one-half year to a full year behind " its standards, city pupils falling below the others. The attainments in the four fundamental operations in arithmetic of varying numbers of the third to eighth grade pupils in a total of 21 cities were measured by the Woody test series A, and proved to be up to standard in the three lower grades, but below in the three upper grades. The handwriting of 7,231 children in rural, graded, and city schools, second to eighth grades, was scored in quality by the Thorndike scale, and compared, also, through conversion by Kelly's method, with Freeman's and the Iowa standards, and shown to fall below them, excepting that the best Wisconsin handwriting both in quality and speed appears to be in the rural schools. The Hillegas scale and the Nassau County supplement to the Hillegas scale were used in the effort to secure a representative State measurement of the results in English composition of 5,848 children of the third to eleventh grades in 15 cities, and revealed that " the children as a whole in these Wisconsin cities do not make a commendable showing." Results in the reading of 7,549 children, tested by the Kansas silent reading test, as reported by 18 cities, two cities including scores made by high-school pupils, show Wisconsin children to be below the standard performances in the third and fourth grades, and above in the fifth to eighth grades.

COUNTY SURVEYS.

Georgia.—What may be designated as the Georgia method of county school survey, illustrated in the material of former reports, continues to be applied during the biennium by M. L. Duggan, rural school agent, acting under the direction of the State department of education. The present list includes:

No. 11. Tattnall County, 1916. No. 12. Screven County, 1916. No. 15. Brooks County, 1917. No. 16. Hart County, 1917. No. 18. Spalding County, 1917. No. 19. Towns County, 1917. No. 20. Jones County, 1918. No. 22. Candler County, 1918. No. 23. Tift County, 1918. No. 24. Ben Hill County, 1918.

By noticing the different existing features placed under the several rubrics used in describing existing conditions, one can see the several lines of change and improvement which are appearing in rural sections in this State from year to year. For example, No. 11 specifies that "moonlight" schools or "no moonlight" classes are organized. No. 15 notes as a new feature "clubs" or "no clubs," such as canning, corn, pig, and poultry, organized. Nos. 16 and 18 emphasize the contrast in outlays for schools as compared with courthouses and jails, and urges a wider extension of a county tax levy and a district tax levy. No. 19 lists the rubrics by means of which one may score a school as standard. No. 22 shows the importance of compulsory attendance, and No. 23, the advent of "the school pig."

A most interesting application of the "survey" type of handling official statistical data in the training given to prospective teachers may be found in "A Brief Social and Economic Survey of Muscogee County," by Ella Jones, and published by the Georgia Club as a bulletin of the State normal school, Athens, Ga., June, 1917 (14 pp.), and "A Brief Social and Economic Survey of Floyd County," by Estelle Hughes, September, 1917 (15 pp.). Similar studies have been made of Clarke, Putnam, and Webster Counties by students at the normal school under the direction of Prof. F. A. Merrill.

Indiana.—That survey reports may serve two forms of educational service is illustrated in the "Educational Survey of Greene County, Ind.," by Supt. Daniel C. McIntosh, published in June, 1916, (110 pp.). "To present the facts, just as they were at the time of the investigation (1913–1916), so they may be understood by everyone, and then to make some practical suggestions to better conditions," were the main objects of this study. The report was also submitted in partial fulfillment of the requirements for the degree of master of arts in the school of education, Indiana University. The material was collected by the county superintendent, with the aid of teachers and principals in the performance of their respective duties, and is arranged in 10 chapters, 29 tables, and 26 figures. The details include: The location and history of the county; the topography, resources, and transportation; the economic, social, and religious conditions; the history, organization, and administration of schools; the physical plant; the teachers; the pupils; programs and curriculum; financial; summary and recommendations. The appendix includes the blanks which were employed in collecting the data and a brief outline of the survey of a rural county.

Texas.—"A Study of Rural Schools in Travis County, Tex.," by E. E. Davis, of the University of Texas, department of extension, division of school interests (Bulletin of the University of Texas, 1916, No. 67, 53 pp.), is also a study that served a double purpose, namely, "to make an accurate and scientific estimate of public education" in a part of Travis County, and to be a chapter of a thesis offered in connection with the requirements for the degree of master of arts in the University of Texas. The scope of the material includes: Economic and social conditions; finances; grounds, buildings, and equipment; course of study; teachers; pupils; conclusions and recommendations. In dealing with the course of study use was made of a number of tests for measuring the achievements of pupils, such as Ayres's scale in handwriting, Thorndike's reading scale, Courtis's series B, for speed and accuracy in arithmetic, and Starch's reasoning tests, scale A, in arithmetic. An attempt was made to use Ballou's scale for measuring English composition, but, owing to certain difficulties, the plan was not executed.

In February, 1917, a "Survey of the Public Schools of Walker County, Tex.," was made by the United States Bureau of Education. It made special study of the academic education and professional training of the teachers, their certificates and tenure of position; salaries; grades taught; school grounds; buildings and equipment; water, toilets, lighting; length of term. A summary of the main findings appeared in the "Texas School Journal," March, 1918, (pp. 13–15).

Missouri.—"A Sanitary Survey of the Rural Schools of Northeast Missouri," by Prof. Willis J. Bray, was published in "The Rural School Messenger," November, 1917 (pp. 47–80). The data in this report were obtained by the tabulation of the answers to more than 100,000 questions.

> These answers were from representative rural schools in each of the 26 counties in this section of Missouri. These questions called for a simple statement of fact and not, with one single exception, for an expression of opinion. The answers obtained can be relied upon as an exact statement of facts in almost every case.

The scope of inquiry included school grounds, school buildings, and schoolrooms, health conditions of children, dental inspection, adenoids, eye defects, hearing, malnutrition, speech defects, water supply, heating of schoolrooms, disposal of dust and dirt, infectious diseases, and disposal of sewage. "The data when received were tabulated by counties, and the totals under each item obtained by adding corresponding items from all the counties."

New York.—The "Report of the Survey of Public Education in Nassau County, N. Y.," conducted in 1916, has been published as a University of the State of New York bulletin, No. 652, December 1, 1917 (287 pp., 112 tables, and 16 figures). It comprises two parts, the first of which is the report of the survey conducted by L. S. Hawkins, of the New York State department of education, and George D. Strayer, of Teachers' College, with the assistance of M. R. Trabue, who had charge of the direction of the field work and the compilation and report of the findings. The second part includes the report of the survey conducted by A. C. Monahan, J. C.

Muerman, Katherine M. Cook, and Belvia E. Cuzzort, representing the United States Bureau of Education. The first part devotes its attention largely but not exclusively to the five towns or superintendent districts; the second part to "practically all the farming territory in the county and all the small villages." The survey reveals extraordinary conditions, which are to be understood in light of the fact that the plan of school administration was "inaugurated over a hundred years ago" and has been essentially outgrown. Accordingly the survey suggests the basic need of a single county organization. In the attempt to measure school conditions and achievements of pupils use is made of more recently established forms of measurement. The school plant is estimated by means of Strayer's score card for city school buildings. About one-fourth of the report (pp. 146–217 and pp. 279–287) is given to the measurement of the achievements of pupils, including English composition (Hillegas), reading scale alpha (Thorndike), completion test, language scales C and L (Trabue), arithmetic (Woody, Courtis, series B, Stone's reasoning), penmanship (Thorndike), and spelling (Ayres). In accounting for the low achievements in fundamental subjects the survey believes that the causes "are not probably to be found in any lack of mental ability or willingness to work on the part of teachers or supervisors. The blame must be put, not on individuals, but on an old worn-out system of school administration and supervision." The inquiry into the achievements of pupils led to the development of the "Nassau County Supplement to the Hillegas Scale for Measuring the Quality of English Compositions" (pp. 160–162).

By means of this scale, which is somewhat more easily used by teachers than the Hillegas scale, teachers may check up with one another two or three times each year and know how their pupils compare with pupils of the same grade and age in neighboring schools. The county supervisors recommended by this report will be able, by means of this scale, to make comparisons between schools in the county and between the Nassau County school system and other school systems wherever it seems necessary. The median results obtained by using this supplement are exactly comparable to the median results obtained by using the Hillegas scale itself.

"TOWN" SURVEYS.

Connecticut.—In order to improve local school conditions and to better the administration of public education, the State board of education of Connecticut instituted in 1916 an "educational inquiry" in the several "towns" of the State which were under State supervision and received State grants. The surveys of the schools were made by agents of the board of education, by personal inspections, aided, where possible, by the cooperation of school committees, superintendents, and citizens. The published reports of these inquiries include the following: "Glastonbury, 1916," by N. Searle Light (pp. 37, Connecticut Bulletin 29); "Seymour, 1916," by N. S. Light and E. W. Ireland (pp. 26, Bulletin 30); "North Stonington, May, 1916," by G. C. Swift (pp. 29, Bulletin 32); "East Windsor, May, 1916," by N. S. Light (pp. 34, Bulletin 45); "New Hartford, 1916," by E. Ward Ireland (pp. 33, Bulletin 30, Series 1917–18); "Kent, 1916–17," by E. Ward Ireland (pp. 33, Bulletin 56, Series 1917–18).

The scope of these inquiries usually included: The early history of the town and the beginnings of school activity; location, topography, and resources; the town's finances and school revenues and expenditures; population analysis; the school population, attendance, classification, and progress of pupils; school buildings, equipment, and grounds; teachers; instruction, observed or tested; administration and supervision. The conditions varying in these towns, a uniform scheme of inspection and testing could not be applied. Conditions were reported as found. "A system of control which makes possible a janitor's striking and cursing the superintendent of schools in the presence of pupils is abominable. And this incident on a day of visitation by the writer has not been the only occurrence of a similar nature" (Glastonbury). The indifference of the school committee to school conditions, and a failure during four months to secure a public meeting or conference led to the adoption of the novel plan of sending within one month a series of seven postals to the voters of the town setting forth the main findings in the form of questions. "The people were entitled to the facts" (East Windsor). Tests of the results of instruction were devised in arithmetic, language, spelling, geography (location), and history (dates) and given in Seymour, New Hartford, and Kent, the results being exhibited in the appendices.

CITY SURVEYS.

Boston, Mass.—The greatly increased cost of public education in Boston has led to two surveys of the city's school sytem. The main features of the first survey, 1911, were stated in the report of the Commissioner of Education (Chap. XXIV, Vol. I, 1914, pp. 521–523). In 1915 the finance commission was requested by the mayor of the city to investigate the great increase in school expenses. "With the appropriation of $5,000 in hand, the finance commission decided to supplement the report of 1911 with an investigation by an educational expert." This inquiry extended from October 1, 1915, to January 22, 1916, the results appearing in the "Report of a Study of Certain Phases of the Public School System of Boston, Mass., made under the auspices of the Boston Finance Commission," City of Boston, Document 87, 1916 (219 pp., 9 chapters, 16 tables, 12 diagrams). A second document, "Report on the Boston School Department with Especial Emphasis on the need for a Reorganization of its Central Administrative System" (66 pp.), contains a review of the report of the survey committee (pp. 6–49), and a review of the assistant superintendents' "reply" (pp. 50–61).

The personnel of the survey committee, with their special topics of study, included James H. Van Sickle, director of the study and chairman of the committee; George D. Strayer, administrative offices and supervision districts; Lewis H. Carris and Egbert E. MacNary, prevocational and vocational features of the schools; Edwin Hebden, vocational needs of Boston children; Leonard P. Ayres, the construction of school buildings; Earle Clark, general study of costs; Don C. Bliss, the organization of supervision and the work of special classes; Henry S. West, the high school situation. "Though the director holds himself individually responsible for each and every part of what is here presented the report represents the combined judgment of all who participated in the study."

The report does not present itself as "a complete survey" of the schools of the city, inasmuch as the scope of the study was restricted to those phases of the system "having to do chiefly with organization and costs," specified as follows: Cost of administration of the school system, with the various duties of the administrative officers; the organization of high and grammar school districts and the arrangement of duties of principals; the proper number of pupils to a teacher; the lengthening of the school year; the elimination of extra pay to teachers for service in vacation schools; the shortening of the common school course from eight to seven years; the value of the new schools and studies established since 1911; method of paying salaries to teachers; whether or not the system of furnishing additional school accommodations is being carefully and economically planned. The director observes that a complete survey would include many additional topics, among which are:

1. The relation of the courses of study to individual differences existing among children and to modern social demands.
2. The quality of teaching.
3. The achievements of pupils.
4. The adequacy of present provision for physical welfare of children, prevocational and vocational training, special classes, playgrounds.
5. The possibility of improving the present system of recording and reporting school facts, including the consideration of the question of clerks in elementary and in high schools.
6. An industrial-commercial survey.
7. The classification of children in the school system, including a study of retardation, elimination, and progress of children, together with a consideration of promotion rates, failures by studies, and the like.

8. A study of the distribution of expenditures among the several units of the school system for the sake of discovering any further possibility of saving without a decrease in the efficiency of the school system.

9. An investigation of the adequacy of the present school plant, with special reference to the effect of such accommodations or equipment upon the health and achievement of school children.

10. An inquiry concerning teachers, including the recruiting of the corps, their salaries, tenure, improvement in service, and the like.

11. A study of the present efficiency of general and special supervision, with particular reference to the contribution made by the supervisory corps to the growth and development of teachers.

12. The care of school buildings, including the qualifications, compensation, and control of janitors.

13. Apparatus and materials for the purposes of training and instruction (textbooks, laboratories, workshops, libraries, schoolroom decorations, etc.).

14. The legal basis of the school system. The relation of the school department to other departments of the city government and to the State legislature.

The discussions and findings of the study are presented in nine chapters dealing with the reorganization of the administration of schools; reorganization of district supervision; the high-school situation; special departments, including practice and training, promotion and research, physical welfare, industrial arts and household arts, evening and voluntary continuation schools, community centers, music, and kindergartens; vocational education; vocational needs of Boston children; expenditures for school purposes in Boston compared with expenditures in (22) other large American cities; the construction of school buildings; subsidiary matters. Among the recommendations which, in the summary, fill nine pages (pp. 6–14), the following may be mentioned: Reorganizing the administration so as to secure a responsible executive head, who should be superintendent of schools; a more adequate plan of supervision by redistricting the areas and taking account of the relationship between the number of pupils in average daily attendance and the number of masters employed; the general organization of junior high schools so as to extend their advantages to all parts of the city and at the same time reduce school costs; the 15 special departments should be regrouped into 10; the prevocational departments should be reorganized as a part of the junior high schools; while Boston ranks second among the 21 cities in expenditure per inhabitant for operation and maintenance of schools, the expenditure per unit of wealth is relatively low; the city's plan of erecting school buildings through the agency of an independent schoolhouse commission has not been successful from the standpoint of cost.

San Francisco, Cal.—The detailed character of the study of the school system of San Francisco is unmistakably indicated by the 23 pages (pp. 621–644) required to present the brief digest of the important recommendations which are made in connection with the discussion of the several topics taken into consideration. The presuppositions which serve as a preamble to this summary could well serve as the foreword to the survey of every public-school system in order to bring together school officials, citizens, and surveyors upon a common platform from which to view with like-mindedness all findings and recommendations.

On January 3, 1916, the Commissioner of Education undertook the organization of the survey which had been proposed as early as December, 1914, by representatives of the San Francisco Chamber of Commerce, and with which the San Francisco board of education cooperated. The Bureau of Education furnished the services of five specialists and the board of education seven members of the commission, who were nominated by the Bureau of Education from a list approved by the board of education. The commission, as finally made up, and the topics to which each member was assigned, are as follows: William T. Bawden, director of field work for the survey commission, manual training, vocational education; Henrietta W. Calvin, home economics; Fletcher B. Dresslar, school architecture, sanitation, buildings, and equipment; Arthur W. Dunn, civic education; John L. Randall, school and home gardening; Frederick E. Farrington, education for immigrants; William M. Davidson, organization, administration, financial and fiscal problems; Charles A. McMurry, elementary schools, courses of study, methods of teaching; John W. Withers, elementary schools, courses of study, methods of teaching; J. Stanley Brown, secondary education; Henry Turner Bailey, fine arts; Will Earhart, music.

The amount of time spent in the field included the month of February by eight members and the month of August, after the opening of the new school year, by four members, aggregating a total of 347 days in San Francisco. Every elementary school, every high school, and 16 evening schools were visited. One hundred and thirty-nine conferences were held with groups of teachers and principals. The expense of the survey was estimated at $8,500. The report is contained in "The Public School System of San Francisco, Cal. A Report to the San Francisco Board of Education of a Survey made under the Direction of the United States Commissioner of Education," Bulletin, 1917, No. 46 (644 pp., 221 tables, 76 figures).

The scope of the survey is readily seen from the following topics, to each of which a separate chapter is devoted: The city of San Francisco; a statistical study of the school system; organization and administration; the finances of the school; school buildings and grounds; the elementary schools; tests of the achievements of pupils; the high schools; civic education; music in the public schools; instruction in art; home economics education; manual training; vocational education; education of the immigrant; educational and ecoomic value of school-directed gardening. A striking feature of is survey is the new and special subjects which are included, indicive of conditions which are peculiar to the western section of the nited States, particularly on the Pacific Coast. The ninth, tenth, fteenth, and sixteenth topics touch upon these specific conditions.

The tests of the achievements of pupils were made in the subjects f penmanship, spelling, reading, and arithmetic; the preparation of e report on the results in each, respectively, being made under the irection of Frank N. Freeman, L. D. Coffman, N. L. Garrison, and arter Alexander. So far as form is concerned, the writing of the hildren was found to be good; in spelling the city as a whole ranks onsiderably above the standard average for a large number of cities; arithemtic, the children made an unusually good showing in peed, but not in accuracy, and did not evidence the usual increase this quality with progress through the grades. Instruction in eading stands in need of standardization so as to insure grade to rade progress and greater uniformity in school situations, and thus facilitate transfer and promotion of students. The intensive tudy of the 13 and 14 year old pupils in 11 elementary schools, elected at random and prepared under the direction of F. J. Kelly, the interests of the development of a program for vocational eduation, indicates a new mode of attack upon the problems in this eld.

Grand Rapids, Mich.—One of the most searching studies of a chool system, that has yet been made, is to be found in the report f the "School Survey of Grand Rapids, Mich., 1916" (506 pp., 17 hapters, 112 tables, 94 diagrams). The survey was originally lanned by the board of education to study the efficiency of instrucion. As the results of the study of the instructional problems were btained, it became apparent that this system was securing a disinctive type of results which doubtless involved high cost, and, acordingly, the scope was extended to include a comparative study f the costs.

The following, including Charles H. Judd, comprised the survey taff and the topics to which they were assigned:

Charles S. Berry, special classes; John F. Bobbitt, elementary school urriculum and school buildings; George S. Counts, arithmetic; John Cragun, music; Calvin O. Davis, high schools; John H. Francis, unior high schools; Frank N. Freeman, writing; William S. Gray, eading; Benjamin F. Pittenger, statistical material (in part) on eachers and promotions; Harold O. Rugg, school finances; and atthew H. Willing, English composition.

Dr. Judd organized the staff, edited the results, and contributed he portions of the report not otherwise indicated above.

The report comprises the following topics in chapter order: The teachers; nonpromotions and failures in the elementary schools; introduction to tests; reading; composition; arithmetic; penmanship; music; instruction in the elementary schools; introduction to high-school report; secondary schools; special classes of the public schools of Grand Rapids; buildings and equipment; the cost of public education in Grand Rapids; the business management of the public schools; administrative organization. The final chapter presents a summary of the entire report (pp. 484–506).

In addition to the results secured in the application of the standard tests which were used to discover the ability of children in each of the school subjects studied, the survey is conspicuous by reason of its specification of the functions of supervision in the development of instruction. Detailed analyses of grade progress in the several subjects are so presented as to indicate both to principals of buildings and to supervisors how the checking up of the results of teaching can be carried forward diagnostically both in particular buildings and in particular grades.

The report in general shows that there is a very satisfactory condition of progress in the Grand Rapids school system. Instruction is of a high order, and the results are relatively superior. The detailed recommendations, which have been outlined in this summary, and are presented in full in the report, would make for an improvement of a school system already well organized and carrying on its work in a very adequate fashion.

Special mention may be made of the use of a new composition scale which is derived from material gathered in a similar test in Denver, Colo. It is interesting to note that, as in the San Francisco survey, music is made a subject of study in the Grand Rapids survey. A new type of foreign language courses is suggested for the junior high school. Emphasis is placed upon the recommendation that advanced courses in the senior high school should be given a "practical or functioning trend." The extended analysis of the data relating to high-school teachers sets a new degree of attainment in survey methods. The discussion of the study of the problem of the cost is clarified by the preliminary definition of the 10 different terms used in this report. Grand Rapids is compared with 18 cities in the items of expense.

St. Louis, Mo.—One of the largest and most carefully planned public-school surveys which has been conducted during the biennium is that of the public schools of St. Louis. This survey "was organized by the board of education for the purpose of securing a definite body of facts on which to base its financial policy and with which to persuade the citizens of St. Louis of the wisdom of this policy," and was conducted "primarily to aid in the passage of a bond issue of

$3,000,000." The survey was authorized by the board of education on May 11, 1916. The survey of instruction was, accordingly, undertaken and completed during the closing weeks of the school year 1915–16. The final reports of the different sections of the survey were filed with the board in August and September, 1916. The cost of the survey was $9,780.06, exclusive of the printing of the reports. The survey was published December, 1917.

The organization of the work of the survey included: (1) General organization of school system; (2) records, observations, and tests of schools, elementary schools, including nonpromotions and promotions, observations of instruction, the course of study, reading, arithmetic, and handwriting, special schools, and high schools; (3) administration: supervisory organization, including music, drawing, and physical education; divisions of administration, including attendance department, department of hygiene, and appointment of teachers and teacher training; (4) building: construction, hygiene, use of buildings for classes; (5) finance.

The respective assignments of the members of the staff to the above topics are indicated in the following list of the reports, which, for purposes of publication, were grouped in seven volumes.

Vol. I.	Part 1.	General statement	Charles H. Judd.
	Part 2.	Administration and organization	H. C. Morrison.
	Part 3.	Appointment of teachers and teacher training	Charles H. Judd.
Vol. II.	Part 1.	Nonpromotions and two-quarter promotions in the elementary schools	Charles H. Judd.
	Part 2.	Observations of elementary school instruction	George A. Mirick.
	Part 3.	The curriculum situation	J. F. Bobbitt.
	Part 4.	Reading	William S. Gray.
	Part 5.	Arithmetic	Charles H. Judd.
	Part 6.	Handwriting	Frank N. Freeman.
	Part 7.	Special schools	Walter F. Dearborn.
Vol. III.		High schools	A. B. Meredith.
Vol. IV.		Finances	H. O. Rugg.
	Part 1.	Public school costs in St. Louis.	
	Part 2.	The business management of the public schools.	
Vol. V.	Part 1.	Construction of school buildings	W. R. McCornack.
	Part 2.	Hygiene of school buildings	F. B. Dresslar.
	Part 3.	The use of elementary and high-school classrooms	S. O. Hartwell.
Vol. VI.	Part 1.	Music	J. Beach Cragun.
	Part 2.	Drawing	F. H. Daniels.
	Part 3.	Physical education	George W. Ehler.
		(Volume VI is not published, and it is expected will not be.)	
Vol. VII.	Part 1.	Child accounting and attendance	H. C. Morrison.
	Part 2.	Medical inspection	E. A. Peterson.

The splendid record which the St. Louis schools had been making through a long period of years gives reason for special interest and satisfaction in the results of this survey. One of our leading school systems thus has its enviable record confirmed when brought to the test of present scientific standards of measurement. The scope of the inquiry is readily gathered from the extended general statement of the findings and recommendations in Volume I (pp. 5–46).

Perhaps the most distinctive and valuable point emphasized in the St. Louis survey is the close connection between the erection of school buildings and the educational policy of a system stated in terms of the course of study and teaching activity. This identification of interests appears again and again in the course of the report and is summarized in the following statement of the director:

> The fact is that a school building is in a very important sense of the word a concrete embodiment of the whole school policy. When one thinks of a school building, therefore, he must think of it in terms of the plans which the school administration has for the use of this building. For example, if a school building contains a gymnasium and a swimming pool, it is perfectly evident that the administrative officers who put the gymnasium and the swimming pool into the building contemplate using it as a part of the regular educational equipment. They will by their policy of construction be called upon immediately to provide the time and instruction necessary to use this material equipment. The moment they begin to try to provide time for the use of the swimming pool, they will raise a number of questions with regard to the relative importance of swimming as contrasted with arithmetic and reading. The swimming pool, therefore, comes to be a part of every consideration of the course of study. What has been said with regard to the swimming pool could be said with regard to all of the other characteristics of the building.
>
> The school system becomes aware of lack of proper building equipments long before the citizens in general become aware of the fact that the course of study and the general policy of the school system are being invaded. It is inevitable, of course, if there is a lack of funds, that the school organization will ultimately be cramped because of this inability to enlarge the work of the schools. But the ordinary citizen is not likely to realize that the lack of funds means a reduction in the richness of the course of study and a deterioration of instruction.

Gary, Ind.—The advancement of educational science and the promotion of administrative practices in controlling the school experiences of children, as reflected in opinion, on one hand, and, as known by deliberate comparative judgments and exact measurements, on the other, have shared in a rare good fortune during the biennium. No experiment in public education in the United States has more quickly or widely influenced the formulation of opinions, and likewise carried conviction within an increasing group of official minds elsewhere than the undertakings and apparent novelties at Gary, Ind. The impression made upon many a visitor by its demonstrations of what can be done for children, if not what children can do for themselves, under the study-play-work program led to efforts to reproduce its obvious features more or less formally in other systems. Indeed, so plainly had some of its leading issues involved been controverted that it was impossible to poll citizens by the question: Are you in favor of "garyizing" our schools?

In view of what "Gary" had become in American public education the most important survey of the biennium is that of its schools. The value of the survey as an instrument for the measurement and the interpretation of educational progress has had no more fortunate opportunity for revelation than in this study. The comparative merits of the traditional methods as over against the surveying methods of estimating the basic worth of contributions to both administrative and instructional experiments may now be exhibited by the critical student more accurately than ever before. Our educational enlightenment has been exceptionally advanced by the report of the study of the Gary schools which was undertaken in 1917 by the General Education Board at the request of the board of education and the city superintendent of Gary. The report, "The Gary Public Schools," New York, 1918 (over 1300 pages), comprises seven parts "dealing with the more characteristic or important aspects of school work at Gary," preceeded by a general volume, "The Gary School: A General Account," which summarizes the separate reports and presents "a comprehensive view of the entire situation:"

Part 1. A General Account. Abraham Flexner and Frank P. Bachman.

Part 2. Organization and Administration. George D. Strayer and Frank P. Bachman.

Part 3. Costs, school year, 1915–1916. Frank P. Bachman and Ralph Bowman.

Part 4. Industrial work. Charles R. Richards.

Part 5. Household arts. Eva W. White.

Part 6. Physical training and play. Lee F. Hanmer.

Part 7. Science teaching. Otis W. Caldwell.

Part 8. Measurement of classroom products. Stuart A. Courtis.[1]

The scope of the survey is more clearly indicated by the special topics considered. In addition to the summarizing by chapters of the several separate parts the general volume presents data and interpretations on: Gary, its industries and its people; course of study; teaching staff; classroom instruction (judged by observations extending over four months and based on a total of 228 recitations in the eight grades and the high school); auditorium and religious instruction; enrollment, attendance, and pupil progress; and conclusion. The special topics of the other parts are:

Part 2. Present-day problems; program; plant; organization; use of plant; supervision and administration; comparative cost.

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[1] The publication of the report did not begin until December, 1918. The successive parts cost, respectively, 25 cents, 15 cents, 25 cents, 25 cents, 10 cents, 10 cents, 10 cents, and 30 cents, and will be sent on receipt of the amount specified, by the General Education Board, 61 Broadway, New York City.

Part 3. Accounting methods; current cost of entire system; current cost of regular day schools; current cost of larger day schools; current cost of the school shops; capital outlay for grounds, buildings, and equipment; fixed charges; financing the system.

Part 4. Shop work in Gary schools; shops and tests (machine, forge, foundry, printing) in Emerson School; shops and tests (printing, woodworking, sheet metal, plumbing, painting, shoe) in Froebel School; shop work in Jefferson School; drawing and handwork; forms and records; summary and conclusions.

Part 5. Aim of household arts work; cooking, time schedule and enrollment; the cafeteria; staff and instruction; tests; merits and defects; sewing, time schedule and enrollment; equipment, staff and instruction; tests; merits and defects.

Part 6. Place of physical training and play; facilities; teaching staff; instruction; tests and results; merits and defects.

Part 7. Science teaching as a part of a modern curriculum; science teaching in the Gary schools (general plan, time allotment); daily teaching schedules and composition of classes; nature study and garden work in primary grades; staff and instruction in nature study; botany and gardening; zoology; physics; chemistry; tests; pupil helpers in science work; conclusion.

Part 8. Introduction; tests and testing conditions; handwriting; spelling; arithmetic; composition; reading (the presentation of the general results of each of the five subjects tested is followed by a critical discussion); factors affecting performance; conclusions.

The several authors received special assistance in various phases of their work from Frank L. Shaw, Edith Holman, Anna C. Thornblum, Trevor Arnett, Frederick Cleveland, Frank E. Spaulding, Anna M. Cooley, Shattuck O. Hartwell, Frank W. Ballou, Paul H. Hanus, Leonard P. Ayres, Edward L. Thorndike, Charles H. Judd, William S. Gray, and groups of assistants, some of whom were especially trained to do specific tasks with unquestioned accuracy. Each part of the report is amplified with numerous tables, charts, illustrations, and special appendices, some of which are richly supplied with samples of the evidences supporting the conclusions. Taken as a whole, the Gary study is probably the most analytic educational survey yet accomplished. By reason of the ample resources available for, and the freedom enjoyed in, the undertaking, it was possible to increase the number of aids and devices used, to vary the approaches to the study of particular phases, and to cross section at different angles the processes and the results characteristic at Gary.

In marked contrast with the usual survey, which addresses itself to the task of finding the secret of "a local situation," the results of the Gary survey, in a peculiar sense, necessarily become vital for all educational interests, especially in the United States. The evaluations discovered are direct contributions, derived from the ascertainable results of an experiment on a large scale. "While Gary would hardly have been selected deliberately as the fittest place for a considerable experiment in public education, nevertheless, from one point of view, perhaps no place could have been chosen where there were fewer obstacles and where conditions were more favorable to innovation." That the schools are feeling the impetus of experimentation is indicated by the "complication" of various detailed features which tends to baffle analysis and evaluation in light of long-established practices, and also by this observation: "There has been a distinct process of development, at times such rapid and unstable development, that our account will in some respects be obsolete before it is printed."

Gary is credited with having "adopted the progressive, modern conception of school function, formulated its conception in clear terms, and with all possible expedition provided facilities adequate to the conception." Its experimentation in utilizing its plant by all the children has resulted in its distinctive contribution to school organization. "Gary has attempted to practice democratic theory in school conduct and discipline." Over against these achievements it is found that the execution of the plan is "defective" both in respect to administration and supervision, that in the fundamental necessities of education, the "old line" branches, the achievement falls short of usual performances, and, in respect to the expansion of the curriculum by the addition of scientific materials, community work, and physical education, etc., "that mere practical occupation is not alone broadly educative." While it is found to be difficult to measure accurately by cost computations, because "the town buys different opportunities under different conditions," it is concluded that the advantages offered "probably cost less than the same advantages on a more conventional plan of school organization."

The most distinctive feature of the survey is its persistent effort to establish its conclusions on the basis of objective evidence. Wherever possible standard and provisional tests were made, including fundamental subjects, science teaching, industrial work, household arts, and physical education. Indeed, in view of the exceptional monographic treatment of the measurements of classroom products, the survey may be regarded as a testing of the tests. The more marked developments at Gary and of the survey use of tests are almost coeval, and there is accordingly a fitting timeliness in this effort to make "a critical study of the results secured," and thus arrive at their true value in the interpretation of specific educational processes.

Standard tests in five of the common subjects were given in the four larger schools and included elementary and high-school grades. The subjects are handwriting, spelling, arithmetic, English composition, and reading. Handwriting was tested by three methods: The Cleveland free choice, Courtis dictation, and specimens obtained from the composition tests. The Ayres scale was used in finding the quality. Spelling was measured by the Ayres scale, the material being collected in three ways: The Cleveland survey lists of disconnected words, sentence dictation at a definite rate, and the spellings in the composition papers. In arithmetic, use was made of the Courtis Series B test in fundamentals and of the multiplication and fraction tests of the Cleveland survey. Narration was the only form of English composition measured, the test given followed the plan in the Denver survey, the quality being rated by the Hillegas scale and the papers scored for different sorts of errors. Oral reading was tested by Gray's scale, and silent reading by a reading-and-reproduction test, by the Kansas Silent Reading test, and by the Trabue language scales B, C, D, and E. The total number of tests, including repetition, was 55. The total number of papers scored and tabulated was 69,282. Unusual care was exercised in securing control of the conditions under which the tests were given. Duplicating the scoring of papers and checking by the examiners were precautions taken to secure accurate data, in addition to the special training given, as in English composition and reading, to the scorers for the task of scoring the papers. The general conclusion derived from the measurements is—

> That the product of classroom teaching of the fundamentals listed above is poor in quality and inadequate in amount; it approximates in character the product of the poorer conventional schools, and reveals in no particular the slightest indication that it has been affected either favorably or unfavorably by the enriched curriculum, or other special features of the Gary schools.
>
> The results do not mean at all that the movement for the socialization of school work is wrong, that the new type of organization is injurious, and that a modernized program is a failure. •
>
> * * * When the investigation was undertaken, it was expected that decisive results would be secured, it must now be emphasized again and again that the effects of the newer ideals of education have not been measured, because at Gary these ideals are operating under such conditions that they play little or no part in determining the product of classroom teaching.

The Gary survey, accordingly, brings us to the point where one must question, whether or not, vital experimentation outruns the range of "standardized" tests? Must these be revised, or even entirely reconstructed in order to keep up with the modern socialized school? Must measurement forsake "the fundamentals" and pursue "the newer ideals of education" in order to preserve the integrity of the science of education?

Harrisburg, Pa.—"The Plain Truth About the High School Situation in Harrisburg" (24 pp.) is another instance which shows how completely the building project of a school system involves the education which it undertakes to give to its children. This document contains (pp. 10–24) the report of James H. Van Sickle who was invited by the special high-school committee to examine the problems presented by the high-school situation. His conclusions and recommendations were based upon a week's observation in the city and transmitted to the chairman of the committee, August 1, 1916. In presenting the three alternate plans which the city could adopt, the report gives a special review of the arguments for the junior high school as a part of a city plan of organization. At the general election on November 7, 1916, the sum of $1,250,000 was voted for the use of the school district in making proper high-school provisions.

Framingham, Mass.—The impossibility of the local authorities and citizens reaching a satisfactory solution of the problem which involved a needed school building in 1914 led the school committee of the town of Framingham to invite James H. Van Sickle, George D. Strayer, and Ernest C. Moore, as a special committee, to study the situation and to report on the building needs of the town. This report is published in the 1916 "Report of the Board of School Committee and of the Superintendent of Schools" as Appendix A (pp. 42–73). Several methods of analysis were used for determining the building situation, such as the growth of the schools, and the indicated future needs of the town, including the Strayer score card for city school buildings, increase in population in school attendance, the retardation and elimination of pupils, the inadequacy of the present plant, the availability of land, the industries into which children may be expected to go, and transportation facilities. On this basis a building program is recommended.

Brookline, Mass.—On April 23, 1917, the report of an "Educational Survey of the Public Schools of Brookline, Mass." (436 pp., with numerous tables and charts), was presented to the school committee of Brookline, which authorized the inquiry on June 5, 1916. The survey staff included James H. Van Sickle, director of the survey; Henry S. West, Harlan Updegraff, George D. Strayer, Egbert E. MacNary, May Ayres, Bertha M. McConkey, James H. McCurdy, Wilbur F. Gordy, and Edwin A. Shaw. The method of the survey, which included observations on the ground, distributed over a period of six months, during which different members of the staff were present at different times, enabled the director "to gain the necessary insight into the complex problems involved which would enable him to present a unified report" for which he assumes full responsibility. The scope of the survey is clearly indicated from the topics to which the chapters are devoted: The Brookline community; the school system; school finances; school buildings and equipment, elementary schools, high school, practical arts and manual training buildings, public gymnasium, summary of existing conditions and plans for the future; the school population; provisions for safeguarding health; the kindergartens; the common branches, with tests in arithmetic, spelling, penmanship, reading, and composition; the special branches; grades eight and nine; the high school; the school of practical arts; a demonstration school for Brookline. A summary of conclusions is presented on pages 5–26.

The most interesting suggestion growing out of this detailed study of this wealthy suburb, which "has been a pioneer in nearly all phases of education which are agitating the public mind to-day," is the recommendation that the school committee establish and maintain a demonstration school for Brookline:

> As a result of an educational survey, something of a practical nature should follow not only in the matter of buildings, organization, and general directions as to educational policy, but in addition something that would afford a continuous opportunity to test and demonstrate the best things capable of being done in the town of Brookline itself.
>
> Other cities, Detroit and Boston, for instance, and a number of smaller cities have established departments of reference and research which deal extensively with the particular school system as a whole. A demonstration school would deal intensively with a problem under controlled conditions. The results in Boston and Detroit are published, and to a certain extent Brookline can share the benefit of their findings. But this is not enough. There are certain problems that Detroit's efficiency office and Boston's efficiency office can not solve for Brookline. These problems must be solved by Brookline and in Brookline. There are other problems which no school system has yet undertaken to solve. Here lies Brookline's opportunity, not only to benefit her own schools, but, through publication of results to make a unique contribution to the cause of public education. Her wealth and her standing among progressive American communities lead one to expect from her some noteworthy contribution to the general welfare.

Richmond, Ind.—Attention has been given to the place of the kindergarten in a number of surveys of city schools, but the first kindergarten survey, as such, is reported in the "Survey of the Kindergartens of Richmond, Ind.," by Alice Temple, issued as Supplementary Educational Monographs (Vol. I, No. 6, September, 1917, the University of Chicago Press, 54 pp.). The material for the study of the eight kindergartens of this city was gathered during visits made on nine days in January and February (1917?), which included also all the first-primary grades. Written material by the kindergarten and first-primary teachers, special conferences with teachers, information from the office, and the course of study planned in 1912 supplied additional data for developing the treatment and reaching the conclusions in the five chapters: The kindergartens; room equipment; the teachers; the relation between the kindergarten and the first grade; curriculum and methods of the kindergarten, including subject matter and methods, manual activities, language and literature, physical activities, and music.

St. Paul, Minn.—The elaborate study of the St. Paul "situation," authorized by an ordinance of the city council on May 23, 1916, amended February 16, 1917, and conducted during the months of January and February, 1917, will afford an opportunity to compare, in part, the fortunes of public education under the recently devised "commission" form of city government with its progress under the form thus displaced.

The four major issues upon which a report was desired included: (1) The situation with respect to the school plant, together with a program for the development of adequate school accommodations; (2) a study of the needs of St. Paul for vocational education and a program for the establishment of this type; (3) a study of the work done in the classroom with particular reference to the development of more efficient teaching and a more satisfactory curriculum; and (4) a consideration of the administration of public education.

The survey commission included George D. Strayer, chairman, Lotus D. Coffman, and Charles A. Prosser, each of whom directed one of the three sections of the study as organized. The "Report of a Survey of the School System of St. Paul, Minn." (pp. 962, 141 tables, 9 figures, 2 charts) comprises: Part I, The Administrative Problem (pp. 5–210, 55 tables); Part II, The Instructional Problem (pp. 211–660, 52 tables, 6 figures); Part III, The Vocational Problem (pp. 661–832, 2 charts); and appendix (pp. 833–962, 34 tables, 3 figures). The editing of the report and the delay in publication suffered from a variety of circumstances, including war services of some of the surveyors. Part I, containing the general administration and school building survey, was prepared by George D. Strayer and N. L. Engelhardt, and treats of the administration of the schools, school attendance and census, conservation of health, the cooperation of the public library with the schools, buildings and equipment, and cost of school maintenance. The adequacy of the city's school plant was measured by the Strayer score card for school buildings. "Three or more competent judges recorded their ratings on each building," "visited by one man at a time so as to permit of an unbiased, unhampered recording of the conditions actually found to exist in the building." The report of Part I was submitted on April 15, 1917, and contained a recommendation of a building program for five years to come, involving a bond issue of $3,000,000 which was voted by the taxpayers in June, 1917. A measure of the city's financial abilities was secured by comparing educational costs with 24 other northern and western cities with populations ranging from 125,000 to 400,000.

The political control of a city school system under the commission form of government is noted by the survey committee, which places itself on record as favoring the control of public education by a board of from five to seven members elected at large, one each year for either five or seven year terms of office at a special school election. This board, within certain limitations, to be determined by the charter, should have the power to levy taxes and be responsible for the expenditure of all moneys raised for educational purposes. The board should, subject to the limitations commonly imposed with respect to the limitation of debt and, upon the vote of the people, have the power to issue bonds for the erection of school buildings. The board should be responsible for the erection of such buildings.

Part II, which deals with instruction and the course of study, and the appendix, presenting data concerning the classification and progress of school pupils, constitute over five-ninths of the entire report. This part was prepared under the direction of Lotus D. Coffman, assisted by the specialists indicated in the list of its topics: Instruction and the course of study; instruction in the first four grades, by Flora J. Cook; instruction in the upper four grades, by Lida L. Tall, Ernest Horn, and L. D. Coffman; measurement of children's achievements, by M. E. Haggerty and M. R. Trabue, assisted by C. L. Harlan, H. N. Fitch, E. Laury, and J. Boraas; the course of study, by Ernest J. Horn, Lida L. Tall, and L. D. Coffman; the secondary school system, by A. B. Meredith. The appendix chapter on classification and progress of school pupils was prepared by Marion Rex Trabue.

The instructional problem was studied by means of data collected in course of the application of six, in part, novel methods of securing information: By direct observation of recitations; by the children's own work, secured through a paper written (or drawn, with colored crayon, by nonwriting first-graders) on the topic "How I Have Fun"; by teachers describing in writing the most satisfactory lesson or lessons, and the points therein considered good, they had given during the first half-year; by the written criticisms and discussions of teachers after observing a model lesson by one of their number (e. g., a lesson in reading by a fourth-grade teacher) in response to five specific questions; by the examination of data furnished by supervisors, principals, and teachers; and, by standardized tests given the pupils. The study of the four upper grades did not include the children's essays and the teachers' written description of lessons. A distinctive contribution is made, among the group of suggestions offered for the improvement of instruction, in the form of plans for making a course of study for the schools and for the reconstruction of the syllabus of the course of study. It is believed that such work will definitely improve the classroom teaching, which should be the aim of all who cooperate in this labor. "The problem of the course of study is to determine what specific items of subject matter are to be taught. The syllabus attempts to assure that such subject matter will be taught and with the greatest efficiency."

Over one-fourth—or 27.8 per cent, to be exact—of the report is given to the results of the extended measurement of the achievement of children in reading, spelling, handwriting, arithmetic, grammar, composition, and language. Twelve tests were distributed between

January 26 and February 21, so as to measure all grades from the first to the fourth year high school and "practically every child in the city" by one or more of the standard tests and scales. In order to make the measurements representative of city conditions, a unique plan of securing six rankings of all the schools on six different points was adopted, and four different groups, "from the poorest to the best," were arranged, from each of which two or more buildings were selected in all tests. As a check on the accuracy of the measurements, test data were secured in each instance, excepting reading in the elementary and the high schools and in grammar, from two groups of schools—those in which the tests were given by the members of the survey staff and those in which the tests were given by the teachers of the classes they were teaching under specific directions. Tabulations were made for the two groups separately and later the results compared and combined.

The following measures were used: Spelling, Ayres; arithmetic, Woody (addition, subtraction, multiplication, division); handwriting, Ayres (three-slant scale, 1912); primary reading, Haggerty (sight and phonetic scales); reading in intermediate and grammar grades, Thorndike's scale, alpha 2, and Haggerty, visual vocabulary; grammar, Buckingham (to eighth grades); language, Trabue (language scales B, C, D, and E in elementary schools and L and M in high schools); composition, Nassau County supplement of the Hillegas scale (elementary and high schools). Computations were made so as to render these midyear tests comparable with the test norms determined at various times in the school year. In order to test the reading abilities of high-school pupils a new scale was devised, involving "an understanding-of-sentence test." It consisted of nine paragraphs selected from seven different writers, of varying degrees of difficulty, each paragraph calling for written answers to five specific questions. While this test proved to be suggestive, it "was found somewhat too difficult." The overlapping of the grades and the variations among schools are shown in detail. The recommendations include a specification of the supervisory values of test results, a suggestion of the device of reclassifying pupils according to specific grade abilities for brief, intensive drill in various subjects until they are brought up to grade, and the establishment of a bureau of educational research.

Part III, The Vocational Problem, was prepared by C. A. Prosser with the assistance of W. H. Henderson, Mrs. Lucinda Prince, Josephine T. Berry, Mr. Gsell, an advisory committee on vocational education consisting of 20 citizens, and several organizations. The study extended from February 6 to April 15, 1917, and was made at the total expense of $2,000. The topics discussed include: Why vocational education for St. Paul; for what vocations should St. Paul give training; how far do the vocations train their own workers, and how far do the St. Paul schools meet the need for vocational training; recommendations as to training needed; recommendations as to types of school; and, vocational and prevocational training for girls and young women. The appendix details short-unit vocational courses for men and for women. The limits of the published report excluded four special studies which were filed for public examination in the office of the city commissioner of education.

Portland, Oreg.—One or two attempts have been made to estimate the accomplishments in school systems directly traceable to earlier surveys. It has occasionally happened that the publication of the report of a given survey has been delayed so long as to permit the announcement of the adoption of a few of the recommendations growing out of the study. The "Report of Supplementary Survey of Portland Public Schools," by P. W. Horn, April, 1917 (64 pp.), is especially interesting as an estimate of the results of a previous survey. This investigation was made "in behalf of the chamber of commerce and the city school board jointly" in the month of April, the investigator spending two and one-half weeks in visiting schools, inspecting the work during school hours, examining written work prepared by pupils, and interviewing "a large number of people who had views to express in regard to the schools." These inquiries were to make a rapid survey of the Portland public schools with special reference to their advance or retrogression since the survey of 1913, which was conducted by Dr. Cubberley and a considerable staff of assistants. This resurvey finds that progress has been made by the Portland schools in 48 different particulars. In two respects a backward step has been taken. Twelve of the original recommendations which have not yet been put into effect should be acted upon favorably. Only three of the original recommendations it probably would not be wise to carry out. Eighteen recommendations are reaffirmed or added in line with the original recommendations. It is found that "the greatest obstacles in the way of the Portland Schools to-day are distrust, the impossibility of building up a better teaching corps under present legislation, and the probability of limiting the school tax levy to 6 mills on the dollar, when at present 6.8 mills is needed."

Bloomington, Ind.—The literature of educational surveys has been permanently enriched by the publication of "A Survey of a Public School System," by Henry Lester Smith. (Teachers' College, Columbia University Contributions to Education, No. 82, 1917, 304 pp., 153 tables, 16 figures.) This survey was undertaken "with the two-fold view of determining and remedying conditions" by using so far as possible the local resources within a school system and of the State university in its midst, to which were added a small amount of outside supervision and direction. It accordingly stands as essentially a cooperative survey. The entire period covered by the study is six years, with most of the work having been done in the years 1912–13 and 1913–14, during the last of which assistance was given by George D. Strayer. At different times various tests were given, respectively, by Clifford W. Stone, E. E. Jones, S. A. Courtis, and H. G. Childs. Theses for the degree of master of arts in Indiana University were prepared by eight graduate students who worked on practical school problems in the city, and portions of five of these studies are incorporated in this publication. As to the practical educational value of an "autosurvey," the author's experience warrants him "in predicting a survey undertaken by the teaching corps as a whole will soon reveal to the superintendent that some of the accomplishments of principals, buildings as a whole, or individual teachers will surpass even his own dream of what could be accomplished."

The scope of the study is readily seen from the list of topics which are treated: The community and the plan of its public school survey; normal progress, retardation, and acceleration; census, enrollment, promotions, failures, withdrawals, repetitions; finances; the course of study; achievement of pupils; teachers; supervision of instruction; school buildings; general conclusions and recommendations; criticisms of Bloomington school survey; and value of a survey similar to that made of Bloomington. In view of the dynamic character of an educational system and the length of time during which this study was in progress, a large amount of the material represents the accumulation of readjustments which the school authorities and teaching staff were enabled to put into practice in the succeeding years. This enrichment of school life was made possible through the more intelligent direction and supervision resulting from the progress of the protracted studies.

Over one-third of the volume is given to the study of the achievement of pupils as measured by standard tests, withdrawals and failures, and correlation of rank in various subjects. The tests given in arithmetic include the Indianapolis, Stone, Courtis, Haggerty and Smith. The handwriting was measured by the Thorndike and Ayres scales. Spelling was tested by the Buckingham, Rice, and Courtis lists. Composition and reading were measured by the Courtis tests in English composition and rates of reading. Drawing was tested by the Thorndike drawing scale. Bloomington will share in the benefits of the State-wide application of the Thorndike visual vocabulary test and understanding of sentences test which were given in a large number of Indiana towns.

In attempting to evaluate the results of self-examinations by a small school system, the author concludes thus:

> Above everything else, a survey of the Bloomington type results in riveting ultimately the surveyor's attention on individual pupils and their performances and away from the mass performance. The result is that individual needs become more quickly evident and consequently more quickly ministered to.

Akron, Ohio.—When the educational committee of the Chamber of Commerce of Akron, Ohio, was organized in December, 1916, it attempted to foster the widespread interest in public-school affairs by making—

> so complete a study of the school system as to make possible a community program of education. * * * We had in mind what is best for the young people of Akron at the present time, and what the line of growth of the educational system should be, in order that each succeeding group of children be properly educated to fit into its life in this city.

Horace L. Brittain, director of the bureau of municipal research, Toronto, Canada, was invited to conduct the survey. He was assisted by Thomas L. Hinckley, of his bureau, and received the cordial cooperation of the local authorities and school staff. On July 10, 1917, he presented his "Report on the Schools of Akron, Made for the Educational Committee of the Akron Chamber of Commerce." (234 pp., 37 tables, numerous graphs and photographs.)

The three main topics included in the study are the raising and administration of school funds, the physical plant and equipment, and what the school revenue buys for the boys and girls of Akron. The consideration of the first topic presents general financial facts, financial methods, and business administration. The observation of the physical plant and equipment includes sites and buildings, ventilation and heating, lighting, cloakrooms, seating, cleaning of rooms, and a school building policy for Akron. The answer to the third topic led to an inquiry as to what is taught in the public schools; how the subjects of the course of study are taught in the elementary schools; instruction in the high schools; educational administration and supervision of instruction; educational records and reports; promotion of school children; retardation and overage; elimination of children; the exceptional child; medical inspection and open-window rooms in the schools; the academic and professional training of teachers, their working day, their pay, and length of service; and the mutual relations of the school and the community. The group of 47 findings and recommendations is presented in brief (pp. 21–35). The educational committee resummarizes the results of the study on pages 5 to 12 for the benefit of the citizens, to the end that the benefits accrue to the school system as early as possible.

Elyria, Ohio.—The radical character of the changes effecting the economic interests and the composition of the population recently appearing in some of our smaller cities, and the consequent bearing upon educational problems are well illustrated in the report of the "Educational Survey of Elyria, Ohio," made under the direction of the United States Commissioner of Education (Bulletin, 1918, No. 15, pp. 300, numerous tables and figures). The survey was financed by the chamber of commerce and received the cooperative support of the school officers and teachers. The field work was under the direction of W. S. Deffenbaugh, with whom was associated seven other members of the Bureau of Education and five persons from outside. Each phase of the school system and its activities studied was assigned to a specialist. A total of 94 distinctive recommendations grew out of the conclusions reached in the study of the following special topics: Administration and supervision; school buildings, high school; instruction in primary grades; instruction in intermediate and grammar grades; civic education; home economics; and vocational education.

Measurements of the results of teaching were made by use of Haggerty's test for reading vocabulary, the Cleveland survey word lists selected from Ayres's spelling scale, Thorndike's scale for quality of penmanship, Woody's (Series B) and Stone's scales in arithmetic. A novel feature in the study of instruction in the primary grades is the analysis of "the out-of-school activities" of children in these four grades. The tabulation (pp. 138–139) of these experiences under home work, home games, vacation activities, and books read, furnishes useful guidance for correlation with the usual school room activities. The occupational analysis of the high school population and the vocational study of the 13 to 15 year old pupils in the elementary grades show a suggestive extension of methods appropriate to the study of vocational problems.

Janesville, Wis.—Upon the invitation of the board of education of Janesville, a city of about 14,000 population, a survey was undertaken by the Wisconsin State department of education. This study offered an opportunity "to present in organized form for the schools of Wisconsin the views of the State department on city school administration." The survey was organized under the general direction of C. P. Cary, the active direction of the field work and the preparation of the report being in charge of W. W. Theisen, who was assisted by H. L. Terry, B. R. Buckingham, H. N. Goddard, Amy Bronsky, Maybell G. Bush, Annie Reynolds, J. M. Dorrans, Janet R. Rankin, O. S. Rice, A. B. Cook, P. W. Dykema, Lucy D. Hale, Cecile W. Flemming, Benjamin P. James, Edgar F. Riley, Frank J. Lowth, and students in several normal schools who assisted in giving and scoring the tests in various school subjects. The report, "An Educational Survey of Janesville, Wis.," issued by

C. P. Cary, Madison, Wis., 1918 (329 pp), does not include all the material presented to the board of education in connection with the findings and recommendations. The published report is organized so as to present, first, the problems of administration, including the problem of high-school organization, the building problem, teachers and salaries, financing the school system, the board of education, census, enrollment, and attendance; and, second, the problems of instruction, including the problem of industrial education, classroom instruction in elementary schools, high-school instruction, special courses and instruction in special subjects, library work, time allotments and course of study, measuring results in school subjects, supervision of instruction, progress and classification of pupils, provisions for special classes, home cooperation, health and recreation. The measurement of results in school subjects include: The Woody, Courtis, and Stone reasoning tests in arithmetic; the Kansas silent-reading test in reading; the Ayres and Buckingham tests in spelling; the Thorndike and Ayres scales in handwriting; the Hillegas, Thorndike, and Trabue scales in grading the composition papers, and the Trabue language completion tests B and C.

Columbia, S. C.—An interesting geographical extension of the survey movement was made when the board of school commissioners of Columbia, S C., requested the United States Commissioner of Education to undertake the direction of a study of its public schools. This is the southeasternmost city of the Union to seek the benefits of a comparison of its educational activity with that of other cities. The report, "The Public Schools of Columbia, S. C.," Bulletin, 1918, No. 28 (192 pp., with numerous tables and figures), is a notable example of the sympathetic and constructive type of educational surveys. In presenting the 23 general recommendations growing out of its labors, the committee assigned to the task "has not undertaken in arbitrary fashion to tell Columbia what her school system should be nor how near the ideal in accomplishment she is nor how far away from it. This committee is not competent to define the ideal school system nor the ideal school practice. It can, however, bring to Columbia's attention those practices which are held by other communities, for the present, at least, to be the best." There is offered, accordingly, "a constructive program, the inauguration of which should properly extend over a period of years." "In justice to the superintendent of schools, the fact should be mentioned that from time to time in his annual reports to the board of school commissioners he has suggested many of the things which this committee recommends."

The characteristic qualities of the survey appear even in the headings of the six chapters of the report, most of which are phrased in the form of suggestive problems and arguments. The city of Columbia and the rise of the public-school systems; are the schools of Columbia adequately supported? insufficient maintenance means meager salaries for school employees; insufficient maintenance limits the activities attempted; insufficient maintenance has rendered the supervision inadequate; the holding power of the system compares favorably with that of other systems. Some aspects of instruction and supervision were studied by means of standard tests in spelling (Ayres) and in arithmetic (Courtis, fundamentals, and Stone, reasonings). The data record interesting and important contrasts between the white and the colored pupils. The survey was made in 1917 by the committee designated by the Commissioner of Education, including four specialists of the bureau, F. F. Bunker, director; Henrietta W. Calvin, J. L. Randall, and H. H. Baish, and Supt. C. B. Gibson, of Savannah, Ga.

Winston-Salem, N. C.—"A Study of the Winston-Salem Schools," by L. A. Williams and J. H. Johnston, 1918 (93 pp.), is a larger outgrowth of the work of the home-county study clubs at the University of North Carolina which led the authorities of Winston-Salem and Forsyth County to desire an extended survey of their schools. The educational study of the schools of Winston-Salem, contained in this volume, is a part of the study of the larger system of the social and economic conditions of Forsyth County and of the industrial situation of the city. The visitation of the schools was made in February, 1917, the superintendent, principals, and teachers cooperating in every way possible. The topics of the report include: Historical; organization; the school plant; the pupils; the teaching staff and supervisory officers; and finances. The summary of the study concludes by saying:

> The superintendent knows that all these difficulties exist. He has repeatedly called attention to them. He needs more money and a larger force with which to handle the problem. That many of these conditions now obtain is the fault not of the school officials but of a too small banking account for the schools.

It is planned to have this study continued by making an examination of the teaching results of the schools.

Alton, Ill.—"A survey's finding is not worth much that could be carried out at once; it furnishes rather a goal toward which we can strive, an ideal that we can pursue." With this expression of its belief in the constructive character of a school survey, the special committee presented on April 29, 1918, to the board of education, city of Alton, Ill., the 29 "necessary and feasible recommendations as obtained from the survey" which had been made during the school year, 1917-18, under the direction of Supt. John W. Withers

("Findings and Recommendations of the Survey of the Alton Public Schools," pp. 88, numerous tables and figures). The cordial reception of the report is indicated by the accompanying record of favorable action upon 10 of these recommendations within less than a month thereafter.

The survey staff comprised eight assistant superintendents and other school officers of the St. Louis schools, each of whom prepared the reports on the following topics, respectively: Organization, administration, and supervision; teachers; spirit; methods of teaching; relations of teachers and other school officers, relations of teachers and children; course of study and school supplies; testing of the results of teaching in the elementary schools; the high school; the progress of children through the grades; and finances. One-third of the report is occupied with the results of the tests employed in six subjects: Arithmetic (Courtis, series B, and No. 8, series A), reading (Starch), spelling (Ayres), written English (specially devised to trace the "growth of sentence sense"), handwriting (Thorndike), and geography (devised by Reavis and Branon, as a completion test for the measurement of minimum geographic knowledge of elementary-school children).

Mount Holly, N. J.—The study of this small school system comprising a staff of 40 teachers and 1,110 pupils, conducted under the direction of the State commissioner of education, is marked by a particular interest in the problems of supervision and teaching. "The lack of a body of significant school records, of a comparative sort and covering a period of years, dealing" with a variety of problems such as "would be asked by a board of education and used by a supervising officer in a continuous self-survey of a system of schools, would seem to indicate a failure on the part of the school officials to fully appreciate the importance of such knowledge as an aid to increased efficiency, and for the information of the public." The observational part of the survey, made in February and in May, 1918, was conducted by A. B. Meredith and Z. E. Scott, of the State department of education. The application of standard tests was made by Profs. C. H. Elliott and C. S. Crow, of the department of education of the State University of New Jersey, the account of which constitutes three-fourths of the report, "Survey of the School System of Mount Holly, N. J., Northampton Township" (80 pp., with numerous tables and figures). The tests used were: English composition, in the grades and the high school (Nassau County scale); handwriting (Thorndike); spelling (Ayres and Buckingham); reading (Thorndike, Alpha 2); arithmetic (Courtis, series B, and Stone, reasoning); algebra, in first year high school (Holtz); and Latin, four years of high school (Henmon). The report closes with 29 recommendations, and a list of the equipment of a biological laboratory for a high school class of 12 pupils.

Des Moines, Iowa.—The applicability of survey methods to specific problems of a particular part of a school system is interestingly illustrated in the "Survey of the High Schools of Des Moines," by Ervin E. Lewis (University of Iowa Extension Bulletin, 1918, No. 37, pp. 64, with tables, figures, and map). The problems considered in this survey are stated as follows:

1. Are new high schools or additions to present buildings needed? If so, how many? Where? When?
2. Are different kinds of high schools needed? Should Des Moines continue its present policy of cosmopolitan high schools, or should special kinds of schools, such as commercial, technical, or trade be established?
3. Are junior or six-year high schools needed?
4. What should be Des Moines' policy with reference to vocational secondary education during the next decade?

The recommendations offered in answer to these questions are based on the results of a careful analysis of the historical development of high schools in the city and a comparison of Des Moines with 25 other cities of its size. A clearer perspective is gained by the concentration of those factors involved in the specific problems. The survey was authorized by the board of directors, sanctioned by the chamber of commerce, and directed by E. E. Lewis, with whom was associated a committee of the extension division and the college of education of the State university, as well as assistants.

Muscatine, Iowa.—The extent to which the problem of a building program, featured in several recent surveys, can be carried further into a stock taking of all the school plant of a small city is illustrated in the "Survey of the School Buildings of Muscatine," by E. J. Ashbaugh (University of Iowa Extension Bulletin, 1918, No. 41, pp. 38, 14 figs.). By means of Strayer's score card for school buildings, the seven large grade buildings, as well as the high-school building, were scored in January, 1918, by two members of the survey staff. It was found that the conditions of buildings and grounds were 22 per cent "good," 21 per cent "fair," and 57 per cent "bad." The findings are graphically detailed for the benefit of community interest and culminate in a group of recommendations "which will take years to complete."

Paterson, N. J.—An illustration of the progress made in the cooperation of the departments of education in higher institutions is found in the survey of the public schools of Paterson, N. J., which was made in the spring of 1918 by the staff and students of the department of educational administration of teachers college. The direction and guidance of the survey were by George D. Strayer,

N. L. Engelhardt, F. W. Hart, and E. S. Evenden. The details were marked out in the practicum in educational administration at the college. Four major studies were undertaken: The ability of Paterson to pay for educational advantages; the school building plant; the achievement of pupils in the elementary schools; the teaching staff and quality of instruction. The material on the last topic is not included in the report which appears in the "Annual Report of the Board of Education of Paterson, N. J., for the year ending June 30, 1918," (pp. 99–290).

The data for the measurement of the achievement of the pupils were gathered between March 14 and April 10, and are accepted as being comparable with the results of other surveys. The subjects measured and the tests given were composition (Nassau County supplement), handwriting (Thorndike), spelling (Ayres), arithmetic (Woody, Stone reasoning, Courtis fundamentals), language (Trabue), and reading (Thorndike, alpha 2). The tests were so arranged that every grade and every child in the regular elementary schools was represented in one or more of the subjects.

City school reports.—The biennium under review has witnessed an interesting addition to the literature of educational surveys in the form of the reports of boards of education and superintendents of schools. The following are a group of reports which illustrate the spread of the survey method and its utilization in creating a more intelligent public who support and patronize the schools:

"A Review of the Rockford (Ill.) Public Schools, 1915–16," by Supt. R. G. Jones (126 pp., 58 tables, 53 charts), contains information which was—

> collected and organized by the staff in the schools and submitted to the board of education by the superintendent of schools. Its purpose is to carry to the homes of this city information concerning the physical property, the curriculum, the teaching staff, the attendance, some measurable results in teaching, and other matters which may interest.

This detailed and forceful presentation of the schools was put forth with the hope of making "every citizen of this city better acquainted with an institution in which he is a stockholder." Tests of the achievements of pupils were made in penmanship, arithmetic, spelling, composition, and reading.

The "Report of the Superintendent of Schools, 1916–17" of Huron, S. Dak., by Supt. F. L. Whitney (86 pp., 35 tables, 39 charts), "attempts to give those more directly concerned a somewhat detailed idea of the present conditions obtaining in their public schools and to let them know what the schools are attempting to do." The material is arranged under these topics: Organization and administration; physical environment; teaching force; pupil accounting; quality of instruction; pupil achievement; and school costs. Tests of pupil achievement were made in first grade vocabulary, spelling, arithmetic, handwriting, reading, composition, and algebra.

The first printed "Report of the Board of Education, 1912–1918," of Rochester, Minn., by Supt. H. A. Johnson (208 pp.), shows how the survey movement has found lodgment in this rapidly growing community.

> In these days schools are surveyed, tested, and measured; but so many times this is done hurriedly and by outsiders. In many cases the results can not help but lack in thoroughness. For the past five years our schools have been constantly surveyed by the superintendent, working in a spirit of cooperation with his teachers.

The effort to secure a definite measurement of the efficiency of their schools led the superintendent to act upon the suggestions contained in the circular of the Bureau of Education, City-School Circular, 1915–16, No. 21, offering "some suggestive points for superintendents in the smaller cities who are surveying their own schools." The material accumulated (pp. 31–141) includes tests in reading, errors in English, grammar, and punctuation, arithmetic, spelling, age-grade, retardation, and acceleration, promotion, etc. Mr. W. F. Miller, of the University of Minnesota, cooperated in giving the tests from which were derived the "cause and effect and analogies tests."

> This report we hope will be studied by every school patron into whose hands it may fall. It answers many questions which have been asked again and again. The tabulations will be thrown on a screen at teachers' and parents' meetings, so that every parent may learn their significance.

Supt. H. O. Dietrich, of Kane, Pa., is utilizing a novel monographic method of reporting the results of self-surveys in the schools of this city. The board of education of Kane has issued the following series of documents: (1) Estimates or positivism. Which? April, 1917 (15 pp.), reporting tests in spelling, handwriting, and arithmetic; (2) Child Accounting for the Schools of Kane, Pa., June, 1917 (8 pp., 7 tables); (3) The Child. Where is He? October, 1917. (8 pp.); (4) Education in Dollars and Cents, March, 1918 (16 pp.); (5) Does it Pay? April, 1918 (15 pp.), containing 15 exhibits from publications of the Bureau of Education; (6) Suggestions for Teachers, June, 1918 (24 pp.), dealing with the course of study. In 1916 he published "An Evidence, the Curwensville Schools" (23 pp.), which was a report modeled on these lines.

Supt. Ernest C. Witham, in the "School Report of the Town of Southington, Conn.," in 1916, summarized the progress of the four previous years, offered a program for the future, and informed his constituency on such matters as retardation and results of tests in English composition, writing, arithmetic, spelling, and improvement of teachers while in service. In his report for 1917, with an increase in graphic and tabular presentations, he again exhibits the quality of instruction in the schools in arithmetic, English composition, spelling, handwriting, algebra, and shows the holding power of the high school.

"The Mirror; As We See Ourselves" (28 pp.), was issued by Supt. Frederick S. Camp as a partial "autosurvey" for the period, September, 1916, to February, 1918, as a report on the work of the supervisor of tests and standards of the public schools of Stamford, Conn. It includes an eighth grade study, grade progress table, time allotment, distribution of marks in eighth grade and high schools, graphic exhibit of school buildings and premises, results of tests in handwriting and eighth grade composition, and a report of the first year's work of the supervisor of tests and standards.

VOCATIONAL EDUCATION SURVEYS.

Vocational education, as a specific problem as well as an element in school situations, has received attention during the biennium in both special and general surveys. The passage of the Smith-Hughes Act by Congress in February, 1917, brought to a Nation-wide conclusion the first definite formative developments of the vocational type of education, and fixed the program for its extension.

The original edition of the report of the Minneapolis Survey for Vocational Education, published on January 1, 1916,[1] being soon exhausted, has been thoroughly revised and issued as "the finished result of the survey" under the title of "Vocational Education Survey of Minneapolis, Minn.," made by the National Society for the Promotion of Industrial Education, by the United States Bureau of Labor Statistics, 1917, Bulletin, Whole No. 199, Vocational Education Series, No. 1 (pp. 582, 25 chapters, 4 appendices, 20 tables, 3 charts).

Indiana.—Four of the surveys for vocational education growing out of the vocational education law passed in February, 1913, by the Indiana Legislature, have appeared within the biennium. This series of surveys is unique in that it attempts, under State authority joined with local cooperation, to provide a State-wide program built up out of the results of surveys of well-selected communities. The State board of education, in accordance with the provision of the act, organized a vocational division, placed in charge of W. F. Book, deputy superintendent, with whom later were associated A. M. Smith, special agent in charge of agricultural education, Adelaide S. Baylor, special agent to supervise domestic science, and Charles H. Winslow, special agent for vocational research. The underlying purpose of all these surveys was—

> to ascertain from a study of the industries of a particular community the facts that would be needed to outline an efficient and economic program of

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[1] See Report of the Commissioner of Education for the year ended June 30, 1916, Vol. I, pp. 166–167.

> vocational training for that community, and to ascertain from a study of the public, private, and parochial schools of the community how far the vocational needs of that community were already being met by existing agencies. The ultimate purpose was to suggest a definite program for organizing and developing vocational education in the particular city or district covered by the survey—

and thus "some definite help might also be obtained for solving the problem of providing an efficient scheme of vocational training for the State as a whole."

The "Report of the Richmond, Ind., Survey for Vocational Education," December 1, 1916 (586 pp., 41 tables, 51 illustrations), was conducted cooperatively by the State board of education, the board of education of Richmond, and Indiana University, assisted by an extensive local survey committee of 51 members under the direction of Robert J. Leonard, of the university. The field work extended from February 1 to May 15, 1916. Occupational information concerning the forms of industrial, commercial, and household employment, juvenile employment, and home and school gardening is collected in detail, and the present provisions of the schools to meet these needs are set forth. Part IV presents the methods of the survey and the forms and schedules used in making type studies.

The "Report of the Evansville, Ind., Survey for Vocational Education," January 1, 1917, by Charles H. Winslow (510 pp., 65 tables, 4 charts), with the assistance of a local survey committee of 12 members and the cooperation of 23 organizations, was prepared in response to the invitation of the Evansville board of education to the State board of education "to make a survey of the city of Evansville, looking toward the establishment of a day vocational school," $2,800 being appropriated for the work. The occupational analyses present the situation in furniture and woodworking industries, building trades, cigar factories, dressmaking, flour mills, garment making, gas engine manufacturing, hospitals and nurses, laundries, machinist trade, plow manufacturing, potteries, printing, railroad shop, retail stores, stove manufacturing, vehicle manufacturing, gardening, and general agriculture. The resources of the schools and libraries for vocational purposes are included. Special attention is called in Part VIII to the vocational needs of colored people.

The "Report of the Jefferson County Survey for Vocational Education," January 1, 1917 (86 pp.), was made by a survey committee of 13 members, including State and local representatives, under the direction of W. F. Book, and contains the material of the survey conducted during the months of June to December, 1916. This study followed four main interests, which are represented in the organization of the report, as follows:

> (1) The economic situation, setting forth important facts pertaining to the location, history, and industries of the county, the character and extent of

> land and other property with which the farmer has to work; (2) the status of husbandry in the county; (3) financial resources of the county and agencies for rural betterment; (4) the status and work of the public schools of the county.

The "Report of the Indianapolis, Ind., Survey for Vocational Education," January 1, 1917 (Vol. I, 400 pp., 31 tables, 4 charts). was prepared by Charles H. Winslow, who was aided by a State survey committee of 28 members and 23 cooperative agencies in the city. One-half of the fund of $7,000 for the expense of the survey was contributed by the State board of education and one-half by the Indiana board of school commissioners. The field work was begun on July 5, 1916. The Indianapolis survey, where possible, is differentiated from the other surveys chiefly in emphasis—

> by the effort to present process analyses by industries, to summarize the results of the survey in analysis charts of occupations, to consummate trade agreements, and to regard the conditions of employment and the vocational needs of boys and girls 14 to 16 years of age, and of those who have passed the age of compulsory school attendance.

The following tables of agreement were entered into: A two-year part-time agreement for instruction in salesmanship, by four firms; a continuation school agreement for instruction in salesmanship, by four firms; agreement for a two-year day course in woodworking, by 16 employers; a three-year compulsory evening continuation school agreement for plumber's apprentices, by 60 employers; agreement for a two-year day course in sheet-metal work; and for a one-year part-time course for girls who wish to become telephone operators is pending.

Wilmington, Del.—"Industrial Education in Wilmington, Delaware" (Bulletin, 1918, No. 25, pp. 102, 57 tables) is the report of a survey made by Fred C. Whitcomb under the direction of the Commissioner of Education. It forms "a part of a comprehensive constructive educational survey of the State of Delaware," undertaken by the Bureau of Education in cooperation with the Delaware Educational Cooperation Association. The purpose of the effort was to correlate the results of a study of the schools, of the industries, and of the provisions for industrial education in both schools and industries, into a constructive program. The field work was accomplished during the period from November, 1915, to January, 1916, use being made of the six forms, reproduced in the appendix. The study is characterized by the special attention given to the 13 or 14 year old pupils, in accordance with the approach made to the problem of vocational education found in recent surveys.

After stating the local features of education and employment legislation affecting minors, the report presents its material under the following topics: A study of certain groups of public school pupils;

a study of the industries; young people in the industries; educational needs of workers, and present educational opportunities; suggestions for a program of industrial education.

Fort Dodge, Iowa.—In "The Boy and the School, a Partial Survey of the Public Schools of Fort Dodge, Iowa," August 15, 1917 (19 pp., Bulletin 32, engineering extension department, Iowa State College of Agriculture), Edward T. Snively undertakes to discover in this typical town, located in an agricultural community—

> the chief reasons why so many boys leave the schools of our city before completing the course; in what grades the greatest number of boys drop out; what they do after leaving school; what their earning capacity is; and what readjustments should be made in our present courses of study to make them meet, even more fully than they are now doing, the needs of our boys and of the community.

The data studied include enrollment of boys in the sixth and seventh grades, in the autumn of 1909 in order to see what had happened to them educationally and vocationally by the time of the study, which was made in February, 1916.

Commercial education surveys.—That a survey should "present a program for development" is illustrated in the studies made of commercial education in Missouri (1916) and in New Mexico (1917). "They had their origin in the rush of the commercial teachers of each State to inaugurate a constructive and comprehensive program of State-wide standardization of commercial education," and were authorized by the commercial departments of the State teachers' associations. A summary of the methods, scope, and findings of the studies is contained in the "Signified Results of Missouri and New Mexico Commercial Education Surveys," by Paul S. Lomax, School Review, February, 1918 (pp. 73–84), who served as the chairman of the committee for each State. Questionnaire data were collected and summarized under these topics: Qualifications of commercial teachers; equipment of commercial departments; business curriculum; courses of study; educational measurements.

HIGHER EDUCATIONAL INSTITUTIONS.

North Dakota.—On August 4, 1915, the newly created North Dakota board of regents invited the Commissioner of Education to assist the board in making a survey of the State educational institutions as required by a recently enacted law. The survey commission, selected jointly by the commissioner and the board, included William T. Bawden, Edwin B. Craighead, and Lotus D. Coffman. The field work was begun November 1, 1915. Approximately 100 days were spent in the field studying the State institutions, including the university, the agricultural college, and the State normal school at Valley City. The final preparation of the report in June, 1916, undertook to handle the findings and recommendations so as to realize the desire of the board for "a comprehensive, constructive report, looking toward the future development of a sound, progressive State policy for higher education rather than a mere critical analysis of any defects that might be found to exist."

"State Higher Educational Institutions of North Dakota, a Report to the North Dakota State Board of Regents of a Survey made under the Direction of the United States Commissioner of Education," Bulletin, 1916, No. 27 (202 pp., 56 tables, 26 figures), presents the report under the following topics: The State of North Dakota; brief outline of educational needs, as indicated by character and resources of the State; the University of North Dakota; the North Dakota Agricultural College; function of the university and agricultural college; department of education at the university and the agricultural college; the State normal schools; the State school of forestry and the State school of science; the State library commission; statistical comparisons; comparison of courses and classes at the university and the agricultural college, and summary of recommendations. This survey is an addition to those which have more recently been emphasizing the need of proper correlation along functional lines. In considering the arrangements for instruction, attention is called to the contrary effects of the "vertical" and the "horizontal" spread in classes and courses. North Dakota being essentially a rural and agricultural State, the determination of its educational needs are most effectively stated (p. 26). The interpretation of these needs is made clearer by the 12 presuppositions which precede (p. 170) the 40 recommendations which are made to the State board of regents.

University of Nevada.—On February 17, 1917, the Commissioner of Education presented the report of the survey of the University of Nevada conducted under his direction, as provided by the action of the Educational Survey Commission created by the legislature of 1915 of that State. The work of the survey was done by Samuel P. Capen and Edwin B. Stevens. The labors of this committee extended during the last five months of 1916. In studying the institution and preparing the material which was published as the "Report of a Survey of the University of Nevada," Bulletin, 1917, No. 19 (184 pp., 30 tables, 13 figures, 25 maps, with numerous tables in the appendix), the survey was attentive to the four basal criticisms indicating unrest in the public mind as to the operations of the institution. The institution's relation to partisan politics seemed to be "the root of all the evil." The detailed topical studies, which follow in many respects the surveys of the University of Iowa and the University of Washington, offer contributions to the field of university administration. The specific topics considered include: The University of Nevada and public sentiment; government and control of the University of

Nevada; higher education in Nevada and the factors which condition it; the University of Nevada and the public service; standards and the distribution of the student body at the University of Nevada; educational administration of the university; training and experience of the faculty; work and remuneration of the teaching staff; costs; organization and needs of separate divisions of the uinversity. The committee finally conceives of an ideal for a university in such a State which is thus described:

> In view of a small population and insistent local needs, the institution would devote itself solely to the education and service of the citizens of its own State. It would consist of but few colleges and departments. Exclusive of a college of arts and sciences designed to give facilities for liberal culture and pure scholarship to those who can take advantage of them (and the number should increase as fast as possible), it would offer technical and professional courses only in lines contributory to the major vocations of the State. It would recognize a special obligation to provide enough trained teachers to insure to the State an evenly served and effective public school system. With respect to the number of students in residence, it would be a small institution. It would, indeed, regard its small size as a peculiar privilege, enabling it to give to those who frequent it a more intimate oversight, a more intensive training than are commonly afforded in very large institutions. It would seek a national reputation for the highest excellence in those few departments which the special needs of its constituency have called into being. It would press for means to secure men and equipment to win such a reputation. It would convince the State of the essential soundness of this program, of the bigness of the opportunity thus presented. It would reinforce its appeal by making itself the State's center of inquiry and distribution for all forms of knowledge bearing on the health, the material interests, the intellectual and social welfare of the citizens.

University of Kentucky.—In January, 1917, the governor of Kentucky, acting in accordance with the resolution of the board of trustees of the University of Kentucky adopted in the preceding month, appointed an investigating committee of the board to report in the following June upon the propriety of consolidating the two colleges of engineering and the conditions involving the "discontent among the alumni and student body toward the existing administration." This committee called to its aid a survey commission comprising Thomas F. Kane and Charles M. McConn, with Kendrick C. Babcock as consulting member, two of whom spent 20 days at the university and the third visiting it at four different times. The "Report of the Survey Commission," Bulletin of the University of Kentucky, July, 1917 (pp. 7–76, with a later report for prolonged consideration of future policy, pp. 77–92), includes also the report of the investigating committee. The work of the survey commission undertook to formulate principles by which practices found current in the institution could be judged accordingly. This study is necessarily local and descriptive, using so far as possible many contributions of the surveys of the University of Iowa and the University of Washington for comparative standards. Because of the peculiar situation involved this study is, for surveys, unusually frank and personal. Of the 69 recommendations reported to the board of trustees, all but one were unanimously adopted.

Iowa State Teachers' College.—The "Report of an Inside Survey" (Bulletin of the Iowa State Teachers' College, April, 1917, 113 pp., 12 tables, 5 maps, and views, and Supplement of the Report, by President H. H. Seerley) is the result of the "protective measure" adopted by the faculty of the Iowa State Teachers' College after the institution had "been surveyed and surveyed by legislative committees, State boards, by the National Bureau of Education, by representatives of foundations and by self-appointed individuals notably curious, honest investigation and otherwise." The "inside survey" was made by a committee of seven members of the faculty, between March 1 and June 1, 1917, with the understanding "that it must be conducted from a different standpoint and with a different purpose" than the previous attempts. A committee of three laymen was designated "to read the report in manuscript" and to satisfy themselves that the facts therein stated were true. An effort was made to follow the survey outlines projected by the committee on normal school standards and surveys of the National Council of State Normal School Presidents and Principals in 1917;[1] but, it was soon found that a report limited to the points therein designated would not adequately represent "the motives, purposes, undertakings, evaluations, expenditures, requirements, capabilities and accomplishments" of the college.

The introductory sections (pp. 5–39) were prepared by H. H. Seerley. The report presents the findings of the several subcommittees on the following eleven topics: The organization of the Iowa State Teachers' College; the curriculums offered; length of time of the several curriculums; entrance requirements; graduation requirements and numbers; special subjects; the training school; qualifications of members of the faculty; salaries, teaching hours, student hours, cost per student hour; accounting and costs; normal school costs.

Illinois colleges.—In order to "discover such facts as would enlighten the church boards of education upon the relation of the church to the colleges and inform the colleges of their relation to each other," the Council of Church Boards of Education, comprising the boards of education of 18 denominations, authorized "A statistical survey of Illinois colleges," by Warren Brown, survey secretary, March 15, 1917, Chicago, Ill. (78 pp.). The data used in the survey were collected between September, 1916, and February, 1917, through the Chicago office of the council. Statistical and graphic representation is given of the density of population of Illinois, geographic source of students, educational source of students, religious source of students, source of students socially; the overlapping of college territories; religious instruction; attendance and retention of students; professional distribution of graduates.

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[1] See Addresses and Proceedings of the National Education Association, Portland, Oreg., 1917, pp. 383–387.

Something of the complexity of the situation involving higher education in Illinois is seen from the fact that in this State there are "37 institutions in addition to the junior colleges connected with high schools competing for patronage from the graduates of the four-year high schools." The questionnaire returns from 2,543 freshmen, about two-fifths of all the liberal arts freshmen in the State, show the following interesting results as to the reasons why they select particular institutions:

	Per cent.
Educational standards of the institution	27.0
Location of college near home	23.0
Influence of other students	11.0
Opportunities for self-support during course	7.3
Influence of college alumni	6.8
Church connection (same denomination)	5.6
Family or relatives connected with college	5.5
Religious life of institution	5.5
Social and athletic life of the college	5.1
Influence of field worker for college	2.5

University of Pittsburgh.—In order to secure a clearer vision of the institutional functions which the university could serve in its local community, the board of trustees of the University of Pittsburgh instituted a survey in 1915 which extended over a period of nearly two years. The wide ramifications to which this study led and the increasing complexity in which a university and its community stand mutually related led to the publication of "A New Basis for Social Progress," by William C. White and Louis J. Heath, December, 1917 (221 pp., Houghton Mifflin Co., New York). This volume is an interesting attempt to formulate principles for educational reorganization which shall bring about a more efficient coordination of the vocational needs of a modern community and the educational agencies within the community endeavoring to satisfy those needs. Present-day failures in education and in other human interests are traced chiefly to a lack of accurate knowledge which can come about only through continued analysis of conditions. Each community is living out a special characteristic life that needs to be studied in such a way as to show how a complete reconstruction of the entire educational system will be possible by abolishing the arbitrary lines drawn between the present branches of knowledge, which are articulated into courses of study, and to allow for a "departmentalization" of knowledges with reference both to students' capacity and community needs. To this end, the authors propose "a municipal foundation for the study and advancement of community education," with a bureau of analysis, a bureau of statistics, and a bureau of supply. This foundation would carry on a continuous survey of community needs and community schooling, correlating the latter on a unit plan for the community. Among the general recommendations, it is proposed that such a foundation for the Pittsburgh community be placed in residence at the University of Pittsburgh.

NEGRO EDUCATION.

A monumental effort to encompass a survey involving the educational interests of about one-tenth of our population is permanently recorded in "Negro Education: A Study of the Private and Higher Schools for Colored People in the United States," prepared in cooperation with the Phelps-Stokes fund under the direction of Thomas Jesse Jones, specialist in the education of racial groups, Bureau of Education, in two volumes, 1917 (Vol. I, Bulletin, 1916, No. 38, pp. 411, 8 tables, 3 maps, 40 plates of illustrations; Vol. II, Bulletin, 1916, No. 39, 704 pp., 31 maps, 1 diagram). This important study grew from a suggestion made in November, 1912, by the trustees of the Phelps-Stokes fund, which provided most of its expense, and was conducted under the immediate direction of the Commissioner of Education. The regular staff of surveyors associated with the director included Thomas J. Woofter, Walter B. Hill, and Ocea Taylor. Special assignments were completed by William Hill, Mrs. T. J. Jones, G. S. Dickerman, Mr. and Mrs. A. H. Albertson, Ogden Purves, John H. Jinks, and Messrs. Bebbington and Higson, chartered accountants of New York. Cooperation was extended by the State superintendents of public instruction of the 15 Southern States involved, by the officers of the schools surveyed, and by the various supporting boards and agencies.

The purpose of the survey was formulated in terms of a long-felt and widespread need for accurate information that would enable one to decide "as to the merits and demerits of the many appeals for money and sympathy in behalf of all sorts and conditions of institutions for the improvement of the Negro." In realizing its original aim of recording an "evaluation of the private schools" for the education of colored people, the study makes a most important contribution towards stabilizing and protecting this necessary educational philanthropy.

The scope of the survey, accordingly, included: (1) All private schools for colored people, whether elementary or higher; (2) all schools above the elementary grades, whether public or private. Reports are made on 790 individual schools and institutions, of which 625 are private schools, 28 State institutions, 64 public high schools, 3 city normal schools, 27 county training schools, and 43 special institutions (arranged geographically in Volume II). A "background" for the private and higher institutions was found in the public school system for Negroes. The information presented concerning each school includes: Characterization of the school; ownership and control; attendance; teachers and workers; organization; financial; plant; and recommendations. Three years were required to complete the undertaking; two, the school years of 1913–14 and 1914–15, being spent in the field work obtaining facts through personal visits to the institutions described; and one, 1915–16, to revisits and other verification of the data and the preparation of the report. A striking feature of the study is the attempt to support the qualitative evaluation by measurement. "For the purpose of this study it was found that the best available measure of public-school facilities was the relation between teachers' salaries, as given by the State superintendents, and the population 6 to 14 years of age, as reported by the United States census. Salaries * * * are the most accurately reported of all the school facts." This ratio as the per capita expenditure for white and colored children was determined for each county in the States of Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia.

The general discussion of the vast material collected on Negro education is presented in Volume I under these topics: General survey; public school facilities; secondary education; college and professional education; preparation of teachers; industrial education; rural education; ownership and control; educational funds and associations; financial accounts and student records; buildings and grounds by Mr. and Mrs. A. H. Albertson; history of Negro education, by George S. Dickerman; and freedmen's aid societies, 1861–1871, by Julius H. Parmelee. The appendix contains eight extensive tables of statistics of Negro schools.

Having performed its difficult task of discrimination, expressed in the constructive policy of recommendations regarding individual institutions, the study offers a large program of educational values in reorganization, in its proposal of a committee representing the various religious denominations to act wisely in the development of properly distributed and graded higher institutions, which should include two universities, three colleges, and junior colleges in 12 States for the Negro race.

FOREIGN SURVEYS.

Saskatchewan, Canada.—" A Survey of Education in the Province of Saskatchewan, Canada: A Report to the Government of the Province of Saskatchewan," by Harold W. Foght, specialist in rural school practice, Bureau of Education, Washington, D. C., Regina, 1918 (183 pp., 8 maps, 31 figs., 32 tables, and additional tables and appendix), is a unique contribution to survey literature. Preliminary discussion as to the need for a scientific study of the educational situation in Saskatchewan to serve as a basis for needed reorganization led to an order in council on June 7, 1917, for an educational survey. " This is probably the first instance on record of a Government extending an invitation to a citizen in the employ of another country to direct the study of its school system." The active field work was extended during three months from August to November, 1917. The director of the survey was assisted on special topics by W. Carson Ryan, jr., of the United States Bureau of Education. Cordial cooperation was extended by various provincial officials, officers, and teachers, and the public education league.

The topics presented include: Saskatchewan, the land and people; fundamental educational needs as indicated by the character and resources of the Province; the present educational system; school organization and administration; school inspection and professional supervision; school population, enrollment and attendance; organization and adaptability of the rural schools; consolidation of rural schools; rural high schools and continuation schools for adults; city, town, and village schools; high schools and collegiate institutes; the teaching staff; the normal schools; vocational education; separate schools; schools in non-English communities; the examination system; school hygiene and health inspection; school support, what the Province pays for education. The methods of inquiry included personal visits and the use of official data and records and questionnaire material. The study is doubly interesting to the student of the survey movement and educational progress because in making comparisons it utilizes the facts of education in the United States. Fifty-eight specific recommendations are made.

" Studies in Higher Education in Ireland and Wales with Suggestions for Universities and Colleges in the United States," Bulletin, 1917, No. 15 (115 pp.), and " Studies in Higher Education in England and Scotland with Suggestions for Universities and Colleges in the United States," Bulletin, 1917, No. 16 (276 pp., 14 tables), by George E. MacLean, are the reports of a special commission to the author by the Commissioner of Education in 1913. These studies are of special interest, made as they were during the years 1913–1915, and recording the changing situation in higher education in England, Scotland, Ireland, and Wales. The aim of the author is "to point out facts and tendencies in higher education in England, Scotland, Ireland, and Wales, by which American universities and colleges can profit." The reports are based on visits to 76 institutions, including universities, university colleges, colleges, and technical and agricultural colleges and schools.

The topics presented in Bulletin No. 15 are: The Dublin University; Trinity College; the Catholic University; the predecessors of the National University; the National University; the three constituent colleges; the Queen's University of Belfast; the department of agriculture and technical instruction; movements preparatory for the University of Wales; the University of Wales; the royal commission and educational problems confronting it; summary of studies and suggestions.

The topics of Bulletin No. 16 are: First group of universities—Oxford, Cambridge, Durham; Scotch universities; University of London; the new or provincial university; independent university colleges—Exeter, Nottingham, Reading, Southampton; technical colleges and schools; agricultural colleges and schools; women's colleges; organization and administration of universities; university officers; provisions for the faculty; state aid and visitation; coordination of institutions; applied science and professional education; advanced study and research without graduate schools; examinations; curricula; student life; and university extension teaching.

MISCELLANEOUS.

"The Third Annual Conference on Educational Measurements," held at Indiana University, April 14, 15, 1916, Bulletin of the Extension Division, February, 1917, offers a constructive program which contributes to setting up standards for survey purposes as indicated by some of its special topics: Standard tests in the work of school administration and measurements applied to school financing, by E. P. Cubberley; survey of Gary schools and prevocational schools in New York City, by B. R. Buckingham; cost of instruction in Indiana high schools; and per cent of failures in high school, by H. G. Childs.

The "Fourth Annual Conference on Educational Measurements," held at Indiana University, April 20, 21, 1917, Bulletin of the Extension Division, April, 1917, gave further indication of the interpretation of, and benefits from, educational surveys in the addresses by G. D. Strayer: Significance and present status of the survey movement, and practical improvement in general school administration resulting from the school survey.

"Suggestive Studies of School Conditions, an Outline Study in School Problems for Women's Clubs, Parent-Teacher Associations, and Community organizations" (101 pp.), prepared by Janet R. Rankin and issued by C. P. Cary, Madison, Wis., 1916, shows some very interesting phases of school surveys at work. In its suggestions for the study of schools, it indicates by outline, bibliography, tables, and graphs, the approach by which the organizations named might consider the following topics: The school and the community; the school children; pupil health and hygiene; physical conditions; school beautification; the school library; the school-teacher; kindergarten; the lower grades, one to four; upper grades, four to eight; discipline and moral instruction; industrial work; recreation; the high school; higher educational organizations; school finances; the school exhibit. The suggestions close with an appendix on method of equipment and procedure.

The more elaborate organization of handbooks for conducting educational surveys is demonstrated in the educational survey series, Volume II, "Self-Surveys by Teacher-Training Schools," by W. H. Allen and C. G. Pearse, World Book Co., 1917 (202 pp.), and Volume III, "Self-Surveys by Colleges and Universities (with a Referendum to College and University Presidents)," by William H. Allen, World Book Co., 1917 (384 pp.). The former volume is an outgrowth of the survey of Wisconsin's eight normal schools made in 1914. "While this book speaks of normal schools, it is addressed to the whole family of teacher-trainers, including so-called normal schools, so-called county training schools, so-called high-school training classes, so-called college courses for teachers, so-called colleges of education, so-called graduate courses in education, so-called summer normal courses, so-called teachers' institutes, and in addition State departments of public instruction, State central boards of education, National Bureau of Education, and volunteer associations of educators, including foundations which deal with questions affecting normal-school ideals and methods." The topics discussed are: Reasons for self-surveys; pathfinding by Wisconsin's normal schools; steps in making a self-survey; making self-surveys build as they go; administration problems; course of study problems; supervision problems; classroom instruction, academic department; training department's training; extra-curricular activities of students; technique of reporting surveys; general needs of teacher-training schools; and exhibits.

The latter work also grew out of surveys, and while organized as "a handbook" it presents a searching discussion of survey methods that are capable of self-application by the different groups constituting a college or university. The analyses of all educational relationships are refined to the utmost and call for a yes-no type of response. The nine main topics, the survey movement in higher education, procedure for a cooperative college survey, relation of trustees to president and faculty, executive and business efficiency, faculty government, extracurricular activities of students, course of study, instructional efficiency, and relation with college communities are analytically treated in the 122 sections. The faculty and alumni questionnaires in the University of Wisconsin survey are included in two exhibits of the appendix.

The diversification of the literature on educational survey is still further indicated in "Methods and Standards for Local School Surveys," by Supt. Don C. Bliss, D. C. Heather & Co., 1918 (pp. 264, 19 illustration charts, 153 tables, and bibliography). This manual designed for the use of a superintendent in studying his local school conditions, is the outgrowth of "constant use * * * of the reports of surveys conducted by groups of experts in different cities," and of separate investigations of educational problems. It serves the purpose of bringing into handy form "a definite chart for the would-be local surveyor." The functions of surveying in school administration are presented in the introduction by G. D. Strayer and the introductory chapter by the author. The guidance derived from the day-to-day experience of the superintendent in meeting school problems is apparent in the arrangement and treatment of the several topics: General conditions; organization and administration, the supervisory and teaching staff, salaries, pupils, efficiency of instruction; course of study and time schedule; the school as a social and community center; school buildings; school hygiene; school finance; planning for future needs. Two chapters offer assistance in the statistical interpretation and the graphical representation of data. The entire treatment culminates in a "survey outline," following the order of the topics treated. A special feature of the work is to be found in the inclusion of many of the standards and forms which have been determined for city systems which have been studied, thus facilitating the comparative use of data locally derived.

"Teacher Benefits for School Surveys," Educational Review of Reviews, No. 48 (24 pp.), was issued by the Institute of Public Service, New York City, to present the answers derived from a digest, prepared by Helen E. Purcell and Hiram H. Bice, of 30 survey reports to the following question: "What are classroom teachers getting from school surveys?"

The thirty-first annual meeting of the Association of Preparatory Schools and Colleges of the Middle States and Maryland, 1917, included the subject of educational surveys in its program, the discussions being presented by Clyde Furst and Samuel P. Capen (Proceedings, pp. 42–59).

"The Fruits of School Surveys," by Leonard B. Koos, School and Society, January 13, 1917, summarizes the responses of 18 out of the 25 city superintendents as to the results of the surveys conducted in their systems. Incomplete as these indications are, they "point to an emphatic justification of the survey movement and furnish encouragement for its extension."

"A Statistical Method for the Treatment of School-survey Data," by L. L. Thurstone, The School Review, May, 1917, offers technical suggestions for the graphic treatment of measurable material collected in an "auto" survey by a city school superintendent.

"College and University Surveys," by Francis A. Thomson, School and Society, June 23, 1917, discusses the surveys of single institutions and of State systems of higher education. J. A. Manahan has prepared a select list, with comment, of State, city, and county surveys, as a bibliography appearing in the University of Virginia Record, Extension Series, November, 1916 (pp. 54–62).

"A Plea for the Educational Survey," by Lawrence A. Averill, School and Society, February 16, 1918, is based on its four "more obvious values," and the claim "that the principle behind the educational survey is a sound one."

The bulletin of the University of South Carolina, No. 66, March, 1918, contains a discussion of school surveys by S. H. Edmunds.

The analytic account of the "Standard Tests used in School Surveys," by Ernest P. Branson, School and Society, December 14, 1918, covering 24 "typical surveys of a general character," shows that the tests were used in 16, the average number of tests used increasing annually at this rate: 1913, 1; 1914, 2; 1915, 4; 1916, 5; 1917, 8. The choices of tests used favored four in reading, two in handwriting, two in spelling, three in arithmetic, and three in composition.

UNPUBLISHED SURVEYS.

The following is a list of unpublished surveys:

Falls County, Tex., conducted by the Bureau of Education, the report being made to the local officers.

Bradley Polytechnic Institute, Peoria, Ill., conducted by the Bureau of Education.

Mobile, Ala., School Survey, 1916, conducted by the Bureau of Municipal Research of New York City.

South River, N. Y., conducted in the department of educational administration, Teachers' College, Columbia University.

Everett, Wash., conducted by Fred C. Ayer, with the aid of 20 teachers and principals, and designed as a survey of "a typical northwest city of 30,000 population," and conceived "from the social rather than the individual point of view."

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 46

MEDICAL EDUCATION, 1916–18

By N. P. COLWELL, M. D.
SECRETARY OF THE COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION

[Advance sheets from the Biennial Survey of Education in the United States, 1916–1918]

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MEDICAL EDUCATION, 1916–18.

By N. P. Colwell, M. D.

Secretary of the Council on Medical Education of the American Medical Association, Chicago.

Contents.—Entrance requirements of medical colleges—Coeducation in medicine—Medical education and the war—Medical education and the selective service—A national control of medical education—Improved standards of licensing boards—State requirements of preliminary education—Confusion from multiple boards—Simplifying medical licensure—Practical and clinical examinations—National Board of Medical Examiners—Premedical college work—Need of a list of approved colleges of arts and sciences—Items concerning medical education—Developing medical education in China.

In previous reports attention was called to the rapid improvements in medical education in the United States, secured through a campaign which was begun by the American Medical Association in 1904. At the beginning of the campaign, the number of medical schools in this country exceeded the total in all the rest of the world. There was clearly an oversupply of medical schools. Many of them were poorly equipped and adhered only to low entrance requirements, while some were conducted for profit and required for admission little or nothing in the way of educational qualifications. It was shown that in 1904 only four medical colleges were requiring any college work for admission, and only from 20 per cent to 25 per cent were actually requiring a four-year high-school education. Under the methods pursued, it is not surprising, therefore, that in 1904 the number of medical students reached the amazing total of 28,142, and that in that year 5,747 physicians were graduated.

The campaign for improvement successfully urged the merging of two or more medical colleges in each of our various cities or States. This resulted in a rapid reduction in the total number, but a material strengthening of the quality of the institutions remaining. At the same time higher standards of preliminary education were urged consisting, first, of the four-year high-school education, then one year, and finally two years of premedical college education. In 1916 the two-year entrance standard was made an essential for any medical school to be considered as acceptable by the American Medical Association. In that year 48 colleges had already put into effect the higher requirement and also 16 State boards had made it the minimum essential of preliminary education of graduates who might seek licenses in those States. Attention was also called to the great improvements in the way of full-time salaried teachers, greatly improved laboratories, the closer relations with teaching hospitals, and the securing of greater endowments.

At the present time there are 90 medical colleges; the number of students during 1917–18 was 13,630, and the number of graduates in 1918 was 2,670.[1] These lower figures represent the normal decrease that was expected under the increased entrance requirements, and are not due to the war. The following tabulation shows the decided increase since 1904 in the number of colleges which have enforced higher entrance requirements and in the number of students and graduates who have held the higher entrance qualifications:

Entrance requirements.	Colleges.				Students.				Graduates.			
	1904		1918		1904		1918		1904		1918	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Four-year high-school education or less [1]...	158	97.5	7	7.8	26,391	93.8	631	4.6	5,378	93.6	258	9.7
One year of college work	......	......	34	37.8	......	......	5,944	43.6	......	......	1,147	43.0
Two years of college work...............	4	2.5	49	54.4	1,761	6.2	7,055	51.8	369	6.4	1,265	47.3
Totals............	162	......	90	......	28,142	......	13,630	......	5,747	......	2,670	......

[1] It is not probable that in 1904 more than about 30 colleges (20 per cent) were actually requiring a four-year high-school education as a minimum for admission.

Instead of 4 (2.5 per cent) medical schools which in 1904 required any college work for admission, for the session of 1917–18 83 (92.2 per cent) medical schools required one or two years of such work; instead of only 1,761 (6.2 per cent) students enrolled in the higher standard colleges in 1904, during last year 12,999 (95.3 per cent) students were enrolled in the higher standard colleges; and instead of only 369 (6.4 per cent) graduates who were turned out by the higher standard colleges in 1904, at the end of last session 2,412 (90.3 per cent) graduated from those institutions. The 7 medical schools which still require only a high-school education or less for admission are also inferior in other respects, and are reported as not recognized by from 27 to 38 State licensing boards. The progress in medical education in respect to preliminary requirements is graphically shown in Chart 1. This general adoption by medical schools of the two-year standard of preliminary education and the other improvements made have brought medical education in this country to a par with that of leading countries of Europe and elsewhere.

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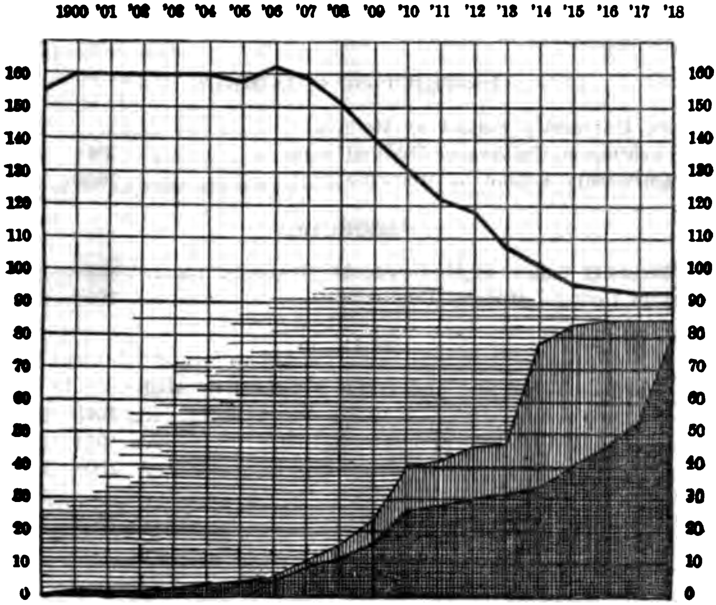
[1] Altogether 2,807 students successfully completed the courses of the senior year. From 137, however, in the Universities of California and Minnesota and in Rush Medical College, the degrees have been withheld pending the completion of a hospital interneship.

(CHART 1.—*Medical schools and entrance requirements.*)

This chart shows (heavy line at the top) the total number of medical schools existing in the various years. The chart also shows the number of medical schools requiring for admission (horizontal shading, indefinite, estimated) a four-year high-school education; (vertical shading) one year of premedical college work and (heavy shading) two years of premedical college work.



	1900	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18
Totals	160	160	160	160	160	158	162	159	151	140	131	122	118	107	106	96	95	94	94
Totals (a)	158	158	158	157	156	153	156	148	135	116	91	80	72	60	24	12	10	9	9
Totals (b)	..	..	..	..	..	..	1	2	5	8	13	14	16	16	44	44	38	31	6
Totals (c)	2	2	2	3	4	5	5	9	11	16	27	28	30	31	34	40	47	54	79

Requiring for admission (*a*) a high school education *or less;* (*b*) one year of college work; (*c*) two or more years of college work.

ENTRANCE REQUIREMENTS OF MEDICAL COLLEGES.

Eighty-one medical schools are now requiring, as a minimum for entrance, *two years* or more of work in a college of liberal arts in addition to a four-year high-school education. The years, respectively, when for each college the one-year and the two-year requirements became effective, and the rating of each college, are as follows:

ALABAMA.	One year.	Two years.	College rating.
University of Alabama School of Medicine	1914	1915	A
ARKANSAS.			
University of Arkansas Medical Department	1915	1918	B

CALIFORNIA.	One year.	Two years.	College rating.
College of Medical Evangelists	1914	1915	B
University of Southern California Medical Department	1914	1916	B
Leland Stanford Junior University School of Medicine		1909	A
University of California Medical School		1905	A
COLORADO.			
University of Colorado School of Medicine		1910	A
CONNECTICUT.			
Yale University School of Medicine		1909	A
DISTRICT OF COLUMBIA.			
Georgetown University School of Medicine		1912	A
George Washington University Medical School	1914	1918	A
Howard University School of Medicine	1910	1914	A
GEORGIA.			
Emory University School of Medicine, Atlanta	1914	1918	A
University of Georgia Medical Department	1914	1918	A
ILLINOIS.			
Chicago College of Medicine and Surgery School of Medicine of Loyola University	1915	1918	B
Hahnemann Medical College and Hospital	1914	1916	B
Northwestern University Medical School	1908	1911	A
Rush Medical College (University of Chicago)		1904	A
University of Illinois College of Medicine	1913	1914	A
INDIANA.			
Indiana University School of Medicine	1909	1910	A
IOWA.			
State University of Iowa College of Medicine	1909	1910	A
State University of Iowa College of Homeopathic Medicine		1910	A
KANSAS.			
University of Kansas School of Medicine		1909	A
KENTUCKY.			
University of Louisville Medical Department	1914	1918	A
LOUISIANA.			
Tulane University of Louisiana School of Medicine	1910	1918	A
MAINE.			
Bowdoin Medical School	1912	1916	A

MARYLAND.

	year. One	years. Two	rating. College
Johns Hopkins University Medical Department		1893	A
University of Maryland School of Medicine and College of Physicians and Surgeons	1914	1918	A

MASSACHUSETTS.

Boston University School of Medicine	1914	1916	A
Medical School of Harvard University		1900	A
Tufts College Medical School	1914	1918	A

MICHIGAN.

Detroit College of Medicine and Surgery	1914	1918	A
University of Michigan Medical School		1909	A
University of Michigan Homeopathic Medical School	1912	1916	A

MINNESOTA.

University of Minnesota Medical School		1907	A

MISSISSIPPI.

University of Mississippi School of Medicine	1914	1918	A

MISSOURI.

St. Louis University School of Medicine	1910	1918	A
University of Missouri School of Medicine	1906	1910	A
Washington University Medical School	1910	1912	A

NEBRASKA.

John A. Creighton Medical College	1914	1918	A
University of Nebraska College of Medicine	1908	1909	A

NEW HAMPSHIRE.

Dartmouth Medical School		1910	A

NEW YORK.

Albany Medical College	1914	1918	A
Columbia University College of Physicians and Surgeons	----	1910	A
Cornell University Medical College	----	1908	A
Fordham University School of Medicine	1911	1918	A
Long Island College Hospital	1914	1918	A
New York Homeo. Med. Coll. and Flower Hospital	1915	1919	B
Syracuse University College of Medicine	1909	1910	A
University and Bellevue Hospital Medical College	1912	1918	A
University of Buffalo Department of Medicine	1914	1918	A

NORTH CAROLINA.

Leonard Medical School	----	1914	B
Wake Forest College, School of Medicine	----	1908	A
University of North Carolina School of Medicine	1910	1917	A

NORTH DAKOTA.

University of North Dakota School of Medicine	----	1907	A

	One year.	Two years.	College rating.
OHIO.			
Electric Medical College	1915	1918	B
Ohio State University College of Medicine	1914	1915	A
Ohio State Univ. Coll. of Homeopathic Medicine	1915	1916	B
University of Cincinnati College of Medicine	1910	1913	A
Western Reserve University School of Medicine	----	1901	A
OKLAHOMA.			
University of Oklahoma School of Medicine	1914	1917	B
OREGON.			
University of Oregon Department of Medicine	1910	1915	A
PENNSYLVANIA.			
Hahnemann Medical College and Hospital	1914	1917	A
Jefferson Medical College	1914	1917	A
Temple University Department of Medicine	1914	1918	B
University of Pennsylvania School of Medicine	1909	1910	A
University of Pittsburgh School of Medicine	1911	1913	A
Woman's Medical College of Pennsylvania	1914	1915	A
SOUTH CAROLINA.			
Medical College of the State of South Carolina	1914	1916	A
SOUTH DAKOTA.			
University of South Dakota College of Medicine	1908	1909	A
TENNESSEE.			
Meharry Medical College	1914	1918	B
Vanderbilt University Medical Department	1914	1918	A
University of Tennessee College of Medicine	1914	1918	A
TEXAS.			
Baylor University College of Medicine	1913	1918	A
University of Texas Department of Medicine	1910	1917	A
UTAH.			
University of Utah School of Medicine	1909	1910	A
VERMONT.			
University of Vermont College of Medicine	1912	1918	A
VIRGINIA.			
Medical College of Virginia	1914	1915	A
University of Virginia Department of Medicine	1910	1917	A
WEST VIRGINIA.			
West Virginia University School of Medicine	1911	1917	A
WISCONSIN.			
Marquette University School of Medicine	1913	1915	A
University of Wisconsin Medical School	----	1907	A

COEDUCATION IN MEDICINE.

The world war has given added impetus to the tendency on the part of medical colleges to throw their doors open to women students. During the last three or four years this action has been taken by several of the largest medical schools in the United States and Canada: In 1914 by the Medical School of the University of Pennsylvania; in 1915 by the Tulane University of Louisiana; in 1916 by the Columbia University College of Physicians and Surgeons; in 1917 by the University and Bellevue Hospital Medical College, by the University of Maryland, and the Medical College of Virginia; and in the present year by Harvard University Medical School and by the Medical Faculty of McGill University. The idea of granting equal opportunities for the two sexes in medical schools, however, had already made rapid advancement before the world war. Over 40 years ago the University of Michigan made its courses in medicine coeducational and practically all State universities have followed the example. From the time of its organization in 1893, the Medical Department of Johns Hopkins University has admitted women students. In New York City the Women's Medical College of the New York Infirmary closed its doors only after Cornell University in 1898 had established its medical school and admitted women students. In 1902 Rush Medical College, which had formed a close affiliation with the University of Chicago, became coeducational. At the present time, therefore, of the 90 colleges existing in the United States 60 admit both sexes.

MEDICAL EDUCATION AND THE WAR.

The reforms in American medical education were largely completed before this country was drawn into the world war. For the past six or seven years the majority of medical schools have not only been enforcing the higher entrance standards but also have been operating under greatly improved conditions in other respects. The majority of students graduating in the past several years, therefore, have received a medical training equal to that obtainable anywhere. Furthermore, it is these recent graduates who, in larger proportions, have entered the Government medical services and who will be largely responsible for the medical care of our American soldiers and sailors. It is evident, therefore, that those fighting for the preservation of America and American ideals now have as skilled medical care as is obtainable anywhere. That this can be said, is due to the energetic campaign to improve medical education that has been carried on during the past 15 years.

The war has affected the supply of physicians for civilian needs, even as it has reduced the supply of those in other technical occupations. Statistics show that this country has one physician to every 739 people, as compared with one to every 1,500 to 2,500 people in the countries of Europe just before the war began. In recent years, however, the demand for medical graduates to fill positions as hospital internes, health officers, medical inspectors, medical teachers, and other positions of responsibility has been greatly increased. This increased demand is due, not to any scarcity of medical graduates, but to the improved qualifications of those now graduating from our medical schools. In earlier years this demand was not so great because few of the graduates then turned out were sufficiently qualified, educationally or professionally, to occupy the positions now open to them. The increase in the demand has been in direct proportion to the improvements in preliminary and medical education.

Even for the army there is a greater demand than in previous times for those of highly technical and special training. Educators are agreed, therefore, that present conditions call for the maintenance of the present entrance requirement of two years of college work; for further improvements in laboratory and clinical equipment; and, particularly, for improved methods of teaching in all medical schools. It is only by maintaining these fair standards that the demand will be supplied, since in the better medical schools, the number of graduates has steadily increased each year for the past five years, and the decrease in the total has been at the expense of the lower-grade colleges.

MEDICAL EDUCATION AND THE SELECTIVE SERVICE.

When the selective-service law was passed in May, 1917, it made no provision for the exemption of medical students. A study of the effect the draft would have on the enrollments of medical schools showed that from 50 to 65 per cent of the students would be taken in the first three calls, which would force the majority of medical schools to suspend. If the war lasted any considerable time, the result would be to seriously diminish or cut off the annual supply of medical graduates; hospitals would be without internes, and there would soon develop a serious shortage of physicians for both military and civilian needs.

The solution to the problem was found in the National Defense Act of 1915, which provided for the Medical Reserve Corps of the Army. Under the provisions of this law medical students were permitted to enroll in the Medical Enlisted Reserve Corps. This made them subject to call at any time should extreme emergency require it. It was the stated policy of the Government, however, to leave these students on an inactive status until they should complete their medical course and secure their hospital training. It was believed that they could render the country a better service by finishing their training and becoming efficient medical officers than by entering at once on active service without that training. The provision for the Medical Enlisted Reserve Corps relieved the uncertainty in regard to the enrollment of medical students, so that medical classes have been retained at a normal status—the only loss being of those students who voluntarily enlisted for military service.

Provision was still necessary, however, for the students in the premedical classes who would arrive at draft age before becoming bona fide medical students. The calling into service of such students would prevent the medical schools from obtaining medical students and would eventually be as serious as if the medical students themselves were called to service. There also arose a serious problem as to medical teachers. Those in the draft age were being called into active service and others were volunteering, even though strong efforts were made to induce them to remain at their teaching duties. It appeared that many of the colleges would have to suspend because of the depletion of the ranks of their teachers.

In an effort to solve these problems, at the call of the Surgeon General, a conference of representatives of medical schools was held in Chicago June 11, 1918. At this conference an advisory committee on medical schools,[1] made up of representatives of medical colleges and licensing boards, was chosen to cooperate with the standing committee on medical education of the Medical Department of the Army, for the prompt solution of such problems as might arise in connection with medical education. At a meeting of the two committees on the day following the Chicago conference, attention was called to the provision made for the Student Army Training Corps, suggesting a solution for the exemption of premedical students. It was also urged that premedical and medical students as well as medical teachers be given Government recognition by being placed in uniform and that the teachers be granted suitable rank.

Another conference of the two committees was held in Washington, July 21, 1918. The arrangements for the Student Army Training Corps had made progress under the War Department's committee on education and special training. Through the Student Army Training Corps it was provided that all students enlisting be retained in the colleges until their special training be completed. On arriving at draft age, the student would be required to register under the selective service law. When called by his local board, each student's record would be examined and it would be determined whether he would be called in active service. The stated policy of the Government, however, was that students who were making satisfactory headway in their studies would be retained in college until their training had been completed. The Students' Army Training Corps clearly provided for the training of medical officers as well as of engineers and officers in other special lines. As to the threatened dearth of medical teachers due to losses by enlistment, a solution of the problem was found in the rule providing for the exemption of those engaged in "essential industries." Each college was requested by the Surgeon General to furnish a list of its essential teachers who, it was planned, would not be called to active duty even though they should enlist, but should be left at their teaching duties on the ground that they were engaged in an "essential industry."

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[1] This committee consisted of Dr. Ray Lyman Wilbur, president of Leland Stanford University, chairman; Dr. William J. Means, president of the Association of American Medical Colleges; Dr. Samuel W. Lambert, dean of Columbia University College of Physicians and Surgeons; Dr. J. Whitridge Williams, dean of Johns Hopkins University Medical Department; Dr. Theodore Hough, dean of the University of Virginia Department of Medicine; Dr. John M. Baldy, president of the Pennsylvania Bureau of Medical Education and Licensure; and Dr. N. P. Colwell, secretary of the Council on Medical Education of the American Medical Association, secretary.

A NATIONAL CONTROL OF MEDICAL EDUCATION.

Through the Medical Enlisted Reserve Corps, a large majority of the medical student enrollment throughout the United States has come under the control of the Surgeon General of the United States Army. This control of the student body, coupled with the measures made necessary to retain in each college an adequate corps of medical instructors, brought the medical schools also to a large extent under the same national control. It became necessary, therefore, soon after a state of war was recognized, for the Surgeon General to designate what medical schools were worthy of recognition and to establish rules for the satisfactory conduct of such colleges. Since the legal control of medical education had previously rested solely with State medical licensing boards, it was determined to consider as "well recognized medical schools" those which were recognized by the majority of State licensing boards. Of the 90 medical colleges now existing, 81 are well recognized.

The unusual demand for physicians as medical officers for the tremendous armies being organized made it necessary carefully to ascertain the present supply of physicians, the future annual output which should be maintained from the medical schools, and the educational standards and other measures which should be enforced, at the same time guaranteeing an adequate supply of physicians for civil and military needs. One of the earliest decisions rendered, which has since been adhered to, was that the present reasonable standards of preliminary education, namely, two years of work in an approved college of arts and sciences or its actual equivalent, should be maintained.[1] In fact, this standard of premedical qualifications was considered sufficiently important that all "well recognized" medical schools were instructed to enforce that requirement of all students admitted on and after October 15, 1918.

Careful consideration has also been given to the question of requiring continuous sessions in medical schools so they might promptly and intelligently be put into effect should the emergency demand it. Looking toward this possibility a few of the medical schools which were properly equipped to do so, have already put that measure into effect.

IMPROVED STANDARDS OF LICENSING BOARDS.

In previous reports reference has been made to the adoption by State licensing boards of higher requirements of preliminary education. A review of the various medical practice acts, published during the present year, shows when any requirement of preliminary education was established in each State, and when, respectively, a four-year high school education or higher standards were adopted. The accompanying chart (Chart 2) shows the progress made during the past 18 years. In 1900, it appears that only six States had made provision for preliminary education in their practice acts and in only one of these was the standard fixed at a four-year high school education or its equivalent. Since 1900, however, progress has indeed been rapid, following closely the progress in entrance requirements of medical colleges. At the beginning of its campaign in 1904, the Council on Medical Education advocated two standards, one for immediate adoption which recommended a four-year high school course and another—the "ideal standard"—which suggested one year of college work including physics, chemistry, and biology. The latter was urged for adoption by January 1, 1908, but the time was extended till January 1, 1910, and was made a requirement for the Class A rating January 1, 1914. The charts show more marked changes in these than in other years. By 1910 the number of States providing for preliminary education had increased to 36, in 28 of which a four-year high school course was required. By 1910 when the Carnegie Foundation for the Advancement of Teaching published its report on medical education, marked improvements had already been made both by medical schools and by State licensing boards, but that report did much to arouse public interest in the campaign for improvement.

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[1] To provide against a resulting shortage of medical officers, an intensive course of instruction for admission to the study of medicine was promulgated in October, 1918, by the committee on education and special training of the War Department. This course crowded into four quarters of three months each, or a total of twelve months, a quantity of work equal to that usually requiring six quarters of three months each. The continuation of this course was made unnecessary by the signing of the armistice.

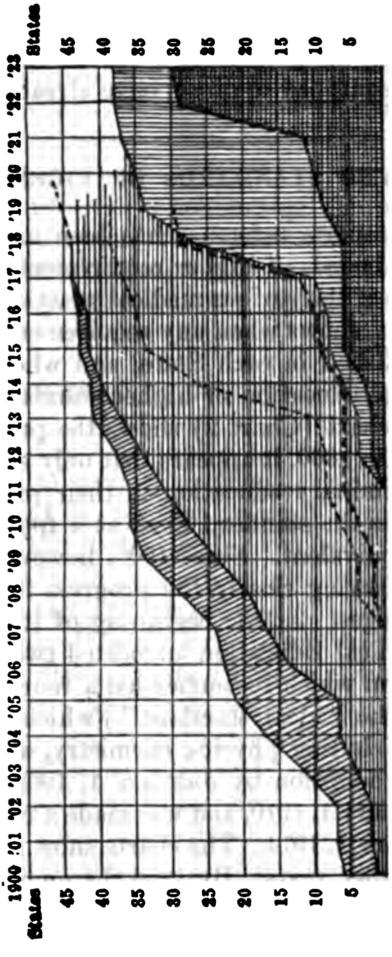
The light and heavy dotted lines indicate the number of boards ea successive year which have *adopted* respectively one and two years collegiate work in addition to a four-year high-school education the minimum preliminary qualification for the license in those Stat The increase in the number of States adopting the higher prelir
nary standards, as indicated by the dotted lines, corresponds qu closely with the increase in the number of medical colleges (s Chart 1) which had put those standards into effect. The dott lines show when the requirements affected students matriculating medical colleges; the increased requirements did not become effecti for graduates until four years later· hence the portions of the ch

CHART 2.—*State requirements of preliminary education.*

As shown by Medical Practice Acts and Board Rules.

Showing by years the increased number of States requiring (diagonal shading) any preliminary requirement (horizontal shading); a four-year high school education (vertical shading); one year of college work, and (heavy shading) two years of college work.

The light and heavy dotted lines in the horizontal shading indicate, respectively, when the one-year and the two-year requirements were *adopted*—when they began to affect *matriculants* in medical schools. The requirements did not affect *graduates* until four years later, as indicated by the vertical and heavy shading. Each vertical line represents a year as indicated. (Compare this chart with Chart 1.)



	1900	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
Any req't....	6	7	7	12	18	21	23	24	29	34	36	36	38	41	42	43	43	44	44	?	?	?	?	?
Less than h.s	5	5	5	8	11	14	9	7	10	10	8	5	4	4	2	1	1	..	..	..	..	..	..	..
4 yr. h.s.....	1	2	2	4	7	7	14	17	19	24	28	31	30	33	34	34	34	34	18	..	..	..	..	..
1 yr. coll....	..	..	..	..	..	..	..	..	..	..	..	..	2	2	3	2	2	4	20	25	25	25	9	8
2 yrs. coll...	..	..	..	..	..	..	..	..	..	..	..	..	2	2	3	6	6	6	6	9	10	12	29	30

shown by the vertical and the heavy shading indicate for each year the number of States in which, respectively, one year and two years of college work were required of all applicants seeking licenses to practice in those States.

STATE REQUIREMENTS OF PRELIMINARY EDUCATION.

There are now 40 States which have adopted requirements of preliminary education in addition to a standard four-year high-school education. These States, the number of college years required, and the time the higher requirements became or become effective are as follows:

State requirements of preliminary education.

State examining board of—	One year of college work.		Two years of college work.	
	Affects students matriculating.	Affects all graduates.	Affects students matriculating.	Affects all graduates.
Alabama			1915–16	1919
Alaska	1914–15	1918	1918–19	1922
Arizona	1914–15	1918	1918–19	1922
Arkansas	1915–16	1919	1918–19	1922
California	1915–16	1919		
Colorado	1908–09	1912	1910–11	1914
Connecticut	1911–12	1915		
Delaware[1]				
District of Columbia[2]				
Florida	1914–15	1918	1918–19	1922
Georgia			1918–19	1922
Idaho[2]				
Illinois	1915–16	1919	1918–19	1922
Indiana	1910–11	1914	1911–12	1915
Iowa			1911–12	1915
Kansas	1910–11	1914	1918–19	1922
Kentucky	1914–15	1918		
Louisiana	1915–16	1919	1918–19	1922
Maine	1915–16	1919		
Maryland	1914–15	1918	1918–19	1922
Massachusetts[2]				
Michigan	1914–15	1918	1918–19	1922
Minnesota			1908–09	1912
Mississippi	1915–16	1919	1919–20	1923
Missouri[1]				
Montana	1914–15	1918	1918–19	1922
Nebraska[1]				
Nevada[2]				
New Hampshire	1914–15	1918	1915–16	1919
New Jersey	1915–16	1919	1916–17	1920
New Mexico	1914–15	1918	1918–19	1922
New York	1917–18	1921	1918–19	1922
North Carolina	1914–15	1918	1918–19	1922
North Dakota			1908–09	1912
Ohio[1]				
Oklahoma	1914–15	1918	1917–18	1921
Oregon[2]				
Pennsylvania	1914–15	1918		
Rhode Island	1914–15	1918	1918–19	1922
South Carolina			1916–17	1920
South Dakota	1908–09	1912	1911–12	1915
Tennessee	1916–17	1920	1918–19	1922
Texas	1914–15	1918		
Utah	1913–14	1917		
Vermont	1913–14	1917	1918–19	1922
Virginia	1914–15	1918	1917–18	1921
Washington	1914–15	1918	1918–19	1922
West Virginia	1917–18	1921		
Wisconsin			1915–16	1919
Wyoming[2]				

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[1] Require a four-year high-school education or its equivalent.

[2] No fixed standard.

CONFUSION FROM MULTIPLE BOARDS.

Besides the increase in the standards of preliminary education already referred to, much progress has been made by medical licensing boards during the last 18 years. In regulating the practice of the healing art, however, much confusion exists in some States because the authority to license those who are to treat the sick has been divided between two or more separate and independent boards. After excellent practice acts have been adopted, providing for fair standards of preliminary and medical education in these States, other laws are passed allowing certain groups of practitioners to secure licenses on lower educational standards. Some of these laws were secured through the misapprehension on the part of legislators regarding the first essential for the practice of the healing art, namely, the necessity of making a diagnosis, which implies a thorough training in the fundamentals of medicine. It is evident that unless a practitioner knows the difference between normal and abnormal conditions and unless he knows what particular disorder the patient is suffering from he is not in position to apply any kind of treatment. The plea of certain healers that they were "not practicing medicine" led to the adoption of special laws providing for the licensing of such practitioners under lower educational qualifications than were required of physicians, although in some States they were granted full authority to practice as physicians. Some of these laws provided for special boards without mentioning educational standards; others provided for lower educational requirements, while still other laws (or amendments) merely exempted these practitioners from the requirements of the medical practice act. So many different boards have been established that at present in the 50 States, including Alaska and the District of Columbia, there are 94 separate and distinct boards having to do with licensing those who are to treat the sick! There are 20 States which are fortunate in having only one board each—the State medical board. Including both medical boards and boards representing various "systems" of healing, there are 19 States having 2 boards each; 7 having 3 boards; 2 having 4 boards each, and 1 State—Arkansas—having 6 different boards. It can be seen at once that with the authority so divided it is impossible to provide efficient protection of the public against uneducated and incompetent practitioners of the healing art.

SIMPLIFYING MEDICAL LICENSURE.

State governments, however, are now trying to avoid a multiplicity of boards and at the same time to guarantee that all who are to treat the sick shall have secured an adequate education. Several States, by legislation, during the past few years, have placed the licensing of all practitioners under a single medical board. Some States demand that all practitioners alike be required to possess the minimum educational qualifications, after which they are given a physician's license and may practice as they please. The most recent scheme in the licensing of those who are to treat the sick is that adopted in Illinois, through the new consolidation law. The Department of Registration and Education in Illinois has in charge not only the licensing of physicians and other practitioners of the healing art, but also dentists, pharmacists, midwives, and those in other licensed occupations. More encouraging, however, is the fact that the enforcement of the new law in Illinois has been placed in the hands of educators of unquestioned ability. It is noteworthy that even poor laws administered by able men bring better results than the best laws administered by inefficient men. The chief point to be considered in measures similar to that adopted in Illinois is to see that, to enforce the laws, those are appointed who will keep in close touch with the progress and needs of general and medical education.

PRACTICAL AND CLINICAL EXAMINATIONS.

There has been much improvement in the character of the licensing examination in some States. A larger number of States have established an efficient examination (including practical laboratory and clinical tests) of those who are to practice the healing art, and in this way they are better protecting the public from ignorance and incompetence. Educational and technical efficiency can not be accurately measured by a written examination alone. A student's fitness to intelligently diagnose and treat human disorders can be brought out only by testing his ability to differentiate between normal and abnormal conditions, in the laboratory as well as at the bedside.

An agency has recently been established—the National Board of Medical Examiners—which has been demonstrating how these practical and clinical examinations should be conducted. This board is now holding its examinations at frequent intervals in prominent hospitals in various large cities throughout the country, and members of State boards have been invited to attend them. The spirit and purpose of the examinations, as well as the ease and facility with which they are conducted, are so evident, that State board members will doubtless be encouraged to adopt them in the regular examination for licensing physicians.

NATIONAL BOARD OF MEDICAL EXAMINERS.

The National Board of Medical Examiners, just referred to, was organized in 1915. It consists of 15 members, including the Surgeon Generals of the Army, Navy, and Public Health Services, and one other representative of each of those services; three representatives of the State medical licensing boards, and six members appointed at large. Its establishment on a high plane was made possible by the Carnegie Foundation for the Advancement of Teaching, which made an appropriation of $15,000 per year to cover the expenses of the board until such time as it might be placed on a self-supporting basis.

Six examinations have been held by the board, the first and second at Washington, respectively, in October, 1916, and in June, 1917; the third at Chicago in October, 1917; the fourth at New York City in January, 1918; and the fifth at Fort Oglethorpe, Ga., and Fort Riley, Kans., in April, 1918. At these five examinations altogether 93 applicants were examined, of whom 72 passed and 21 failed, the percentage of failures being 22.6 per cent.

Date of examination.	Where held.	Total examined.	Passed.	Failed.	Percentage failed.
October, 1916	Washington	10	5	5	50
June, 1917	Washington	12	9	3	33.3
October, 1917	Chicago	28	22	6	21.5
January, 1918	New York	20	18	2	10
April, 1918	Fort Oglethorpe Fort Riley	23	18	5	21.7
Total		93	72	21	22.6

The educational requirements of applicants are: (*a*) A four-year high-school course; (*b*) two years of acceptable college work, including courses in physics, chemistry, biology, and a modern language; (*c*) graduation from a medical school rated in Class A by the American Medical Association; and (*d*) a year spent in an acceptable hospital as an interne or in a laboratory. These requirements apply to graduates of medical schools in 1912 and thereafter. The board may accept equivalent credentials of applicants who graduated prior to 1912. Credentials must be presented to the board prior to the examination sufficiently early to permit investigation. The only fee is $5 for registration. There is no examination fee.

This board is a voluntary organization, its object being to conduct examinations of physicians so thorough as to prove without a doubt their qualifications for the practice of medicine. The value of its certificate, aside from being a qualification of merit, depends on the recognition given to it by State medical licensing boards. Such recognition has already been given, or assured, by the licensing boards of the 12 following States: Colorado, Delaware, Florida, Idaho, Kentucky, Maryland, New Hampshire, North Carolina, North Dakota, Pennsylvania, Rhode Island, Vermont.

When the permanency of the national board is established and the high character of its examinations is more generally recognized, its certificates will doubtless be recognized by the licensing boards of a larger number, if not all States. It will also furnish a credential by which reciprocity in medical licensure with other countries may be established. A successful applicant may enter the regular medical corps of either the Army or Navy without further professional examinations if his papers are passed and are satisfactory to a board of examiners of those services.

PREMEDICAL COLLEGE WORK.

Since, in 1916, two years of work in an "approved" college had been so generally adopted as a minimum educational requirement for admission to medical schools in the United States, it became important to prepare a schedule of the subjects taught in the first two years of recognized colleges which would best prepare the student for his subsequent medical work. A circular letter was sent out by the Council on Medical Education to presidents of one hundred or more of the leading universities, as well as to registrars and university examiners, who were skilled in the evaluation of credentials of work done in various educational institutions. In this way an abundance of data was collected. A special committee was appointed to study the problem and to develop a schedule of required and elective subjects which make up the 60 semester hours required, and to have this schedule conform as nearly as possible with the regular curricula of colleges of arts and sciences. The committee which was selected and began the work in 1916 and was ratified by the council in February, 1917, is as follows:

Dr. Kendrick C. Babcock, Urbana, Ill., chairman, formerly specialist in higher education of the United States Bureau of Education; now dean of the college of liberal arts and sciences of the University of Illinois and intimately identified with the work of the North Central Association of Colleges and Secondary Schools and the Association of American Universities in standardizing colleges of arts and sciences.

Prof. George Gailey Chambers, director of admissions, University of Pennsylvania, Philadelphia, representing the Association of American Universities.

Dr. W. F. R. Phillips, professor of anatomy of the Medical College of the State of South Carolina, Charleston, representing the Association of American Medical Colleges.

Dr. Theodore Hough, dean of the University of Virginia Department of Medicine, Charlottesville.

Dr. N. P. Colwell, secretary of the Council on Medical Education of the American Medical Association, Chicago.

A preliminary report of this committee was prepared and published in August, 1917. It was presented for discussion at the annual congress on medical education and licensure which was held in Chicago in February, 1918, following which the committee completed this report which, as finally adopted, is as follows:

I. HIGH-SCHOOL REQUIREMENTS.

(*a*) For admission to the two-year premedical college course, students shall have completed a four-year course of at least 14 units (15 after Jan. 1, 1920) in a standard accredited high school or other institution of standard secondary school grade, or have the equivalent as demonstrated by examinations conducted by the College Entrance Examination Board, or by the authorized examiner of a standard college or university which has been approved by the Council on Medical Education. Unless all the entrance units are obtained by examination, a detailed statement of attendance at the secondary school, and a transcript of the student's work, should be kept on file by the college authorities. This evidence of actual attendance at the secondary schools should be obtained, no matter whether the student is admitted to the freshman or to higher classes.

(*b*) Credits for admission to the premedical college course may be granted for the subjects shown in the following list and for any other subject counted by a standard accredited high school as a part of the requirements for its diploma, provided that at least 11 units must be offered in Groups I–V:

Schedule of subjects required or accepted for entrance to the premedical college course.

Subjects.	Units.	Required.
GROUP I, ENGLISH—		
Literature and composition	3–4	3
GROUP II, FOREIGN LANGUAGES—		
Latin	1–4	2
Greek	1–3	
French or German	1–4	
Other foreign languages	1–4	
GROUP III, MATHEMATICS—		
Elementary algebra	1	1
Advanced algebra	½–1	----
Plane geometry	1	1
Solid geometry	½	----
Trigonometry	½	----
GROUP IV, HISTORY—		
Ancient history	½–1	1
Medieval and modern history	½–1	
English history	½–1	
American history	½–1	
Civil government	½–1	
GROUP V, SCIENCE—		
Botany	½–1	----
Zoology	½–1	----
Chemistry	1	----
Physics	1	----
Physiography	½–1	----
Physiology	½–1	----
Astronomy	½	----
Geology	½–1	----

Subjects.	Units.	Required.
GROUP VI, MISCELLANEOUS—		
Agriculture	1–2	----
Bookkeeping	½–1	----
Business law	½	----
Commercial geography	½–1	----
Domestic science	1–2	----
Drawing, freehand and mechanical	½–2	----
Economics and economic history	½–1	----
Manual training	1–2	----
Music: Appreciation or harmony	1–2	----

NOTE.—A unit is the credit value of at least 36 weeks' work of four or five recitation periods per week, each recitation period to be not less than 40 minutes. In other words, a unit represents a year's study in any subject in a secondary school constituting approximately a quarter of a full year's work. A satisfactory year's work in any subject can not be accomplished under ordinary circumstances in less than 120 sixty-minute hours or their equivalent.

Both of the required units of foreign language must be of the same language, but the two units may be presented in any one of the languages specified.

Of the 14 units of high-school work (15 after Jan. 1, 1920), 8 units are required, as indicated in the foregoing schedule; the balance may be made up from any of the other subjects in the schedule.

II. PREMEDICAL COLLEGE COURSE.

(*c*) Beginning January 1, 1918, the minimum requirement for admission to acceptable medical schools, in addition to the high-school work specified above, will be 60 semester hours of collegiate work, extending through two years, of 32 weeks each, exclusive of holidays, in a college approved by the council on medical education. The subjects included in the two years of college work should be in accordance with the following schedule:

Schedule of subjects of the two-year premedical college course.

(Sixty semester hours required.)

	Semester hours.
Required subjects:	
Chemistry (a)	12
Physics (b)	8
Biology (c)	8
English composition and literature (d)	6
Other nonscience subjects (e)	12
Subjects strongly urged:	
French or German (f)	6–12
Advanced botany or advanced zoology	3–6
Psychology	3–6
Advanced mathematics, including algebra and trigonometry	3–6
Additional courses in chemistry	3–6

Other suggested electives:
English (additional), economics, history, sociology, political science, logic, mathematics, Latin, Greek, drawing.

NOTE.—A semester hour is the credit value of 16 weeks' work consisting of one lecture or recitation period per week, each period to be not less than 50 minutes net, at least 2 hours of laboratory work to be considered as the equivalent of one lecture or recitation period.

SUGGESTIONS REGARDING INDIVIDUAL SUBJECTS.

(*a*) *Chemistry.*—Twelve semester hours required (eight until January 1, 1920) of which at least eight semester hours must be in general inorganic chemistry, including four semester hours of laboratory work. In the interpretation of this rule work in qualitative analysis may be counted as general inorganic chemistry. The remaining four semester hours (required after January 1, 1920) may consist of additional work in general chemistry or of work in analytic or organic chemistry.

(*b*) *Physics.*—Eight semester hours required, of which at least two must be laboratory work. It is urged that this course be preceded by a course in trigonometry. This requirement may be satisfied by six semester hours of college physics, of which two must be laboratory work, if preceded by a year (one unit) of high-school physics.

(*c*) *Biology.*—Eight semester hours required, of which four must consist of laboratory work. This requirement may be satisfied by a course of eight semester hours in either general biology or zoology, or by courses of four semester hours each in zoology and botany, but not by botany alone. The requirement may also be satisfied by six semester hours of college biology or zoology, of which three should be devoted to laboratory work if preceded by a year (one unit) of high-school biology or zoology.

(*d*) *English composition and literature.*—The usual introductory college course of six semester hours, or its equivalent, is required.

(*e*) *Nonscience subjects.*—Of the 60 semester hours required as the measurement of 2 years of college work, at least 18, including the 6 semester hours in English, should be in subjects other than the physical, chemical, or biologic sciences.

(*f*) *French or German.*—A reading knowledge of one of these languages is strongly urged. If the reading knowledge in one of these languages is obtained on the basis of high-school work, the student is urged to take the other language in his college course. It is not considered advisable, however, to spend more than 12 of the required 60 semester hours on foreign languages. In case a reading knowledge of one language is obtained by 6 semester hours of college work another 6 semester hours may be well spent in taking the beginner's course in the other language. If this is followed up by a systematic reading of scientific prose a reading knowledge of the second language may be readily acquired. When a student spends more than two years in college he may well spend 12 semester hours of his college work in the second language.

NEED OF A LIST OF APPROVED COLLEGES OF ARTS AND SCIENCES.

The most imperative present need in medical education in the United States is a reliable list of colleges of arts and sciences which has been approved by some competent standardizing agency. This is especially needed if the present standards of education preliminary to the study of medicine are to be properly enforced. There are a thousand or more institutions in this country bearing the name of "college" or "university" which vary widely in their entrance standards; in the number and character of their teachers; and in the quantity and quality of their instruction. They range from the highest educational institutions to be found in any country down to the institutions which are entirely lacking in educational merit or which may be actually engaged in the sale of diplomas. Prospective college students at present have no reliable list to guide them in the selection of a college. They are frequently at the mercy of those who insert pretentious advertisements in popular magazines or flood the mails with circulars setting forth in glowing terms the merits of their respective schools when, as a matter of fact, such schools may have no moral right to be referred to as educational institutions.

Lists of approved colleges have been established by two prominent educational organizations—the Association of American Universities and the North Central Association of Colleges and Preparatory Schools which are fairly reliable so far as they go. The former association, however, has not taken into consideration a large number of colleges and "junior colleges" which are in position to furnish a satisfactory training in the subjects included in the first two years of college work. The latter does include such institutions, but, unfortunately, its jurisdiction covers only 17 States. The Association of Colleges and Preparatory Schools of the Southern States, which covers 14 other States, requires a minimum standard of the colleges in membership and is about to establish a list of approved colleges similar to that of the North Central Association. Then its list of approved colleges will doubtless include a much larger number than are at present indicated in its membership. There is need of reliable standardizing agencies which will establish lists of approved colleges in 7 Western States and in 10 North Atlantic[1] and New England States. It is hoped that such agencies will soon be inaugurated, that all the agencies will be affiliated or merged so as to establish uniformity of standards, and that a nation-wide list of approved colleges may be established. In the investigations to be made hereafter by all these standardizing agencies, in the interest of a better medical education, it is hoped that special attention will be given to the equipment and facilities available for the teaching of the essential premedical sciences, physics, chemistry, and biology, including both didactic and laboratory instruction.

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[1] It is announced that the Association of Colleges and Preparatory Schools of the Middle States and Maryland has decided to establish a list of the approved colleges and junior colleges located in that district.

ITEMS CONCERNING MEDICAL EDUCATION.

Arkansas.—The new Isaac Folsom Clinic, clinical building of the University of Arkansas Medical Department, has been completed at a cost of $35,000. The old medical school building is being equipped as an isolation hospital at a cost of $6,000, this sum having been appropriated for the purpose by the State.

California.—The College of Physicians and Surgeons, Medical Department of the University of Southern California, Los Angeles, will require the hospital interne year for all students entering during 1918–19 and thereafter.

The College of Medical Evangelists during the last 12 months has established its clinical department in Los Angeles. A city block has been purchased on which five buildings including a 75-bed hospital, a dispensary, two dormitories, and a hydrotherapy building have been completed at a cost of approximately $100,000.

A school for the intensive training of medical officers for the United States Army was established in San Francisco, March 15, 1918, under the direction of the medical faculties of the University of California and Stanford University.

Colorado.—The Colorado Legislature voted a special appropriation of $150,000 a year for the next 10 years to be used on buildings for the University of Colorado. The school of medicine will secure new buildings from this fund.

Connecticut.—During the past year Yale University has secured an endowment of $2,500,000 for placing the departments of medicine, surgery, obstetrics, and gynecology on a full-time clinical basis. A contract with the New Haven General Hospital gives the medical school complete control of the public wards.

Yale University School of Medicine is doing its part in solving problems connected with the war. Its departments of physiology, pathologic chemistry and pathology, particularly, have been aiding the Government in providing gas masks for the American troops and in conducting experiments leading to the reduction of fatalities from gas warfare.

Georgia.—Emory University School of Medicine has received $5,000 by the will of J. B. White, Augusta, to establish a camp for the treatment of tuberculosis.

Illinois.—University of Illinois College of Medicine, Chicago, has adopted the quadramester system by which each 12 months is divided into terms of four months each. Under this arrangement students may begin the study of medicine at the beginning of any one of the three terms.

Indiana.—The Indiana University School of Medicine is erecting a new medical building on the property adjoining the Robert W.

Long Hospital, Indianapolis, at an approximate cost of $400,000. The new building will consist of four or five stories and be of material harmonizing with the hospital buildings. About $150,000 of this sum will be realized from the sale of the old medical building.

Maryland.—The Maryland Legislature, at its recent session, appropriated $25,000 annually for two years for the University of Maryland Medical School. The medical school has received as a gift the medical library and surgical instruments of the late Dr. Charles F. Bevan. The medical school has also voted to admit women students.

Johns Hopkins Hospital has received $100,000 from the will of Jennie Gillender and $300,000 from the estate of James Buchanan Brady.

Massachusetts.—Harvard Medical School has voted to admit women students. This has been due to the heavy draft of the war on the medical profession.

Boston University School of Medicine announces that it has become nonsectarian and will offer courses in regular materia medica, therapeutics, and practice.

Michigan.—The Detroit College of Medicine and Surgery has been taken over by the city of Detroit and placed under the control of the board of education. It will hereafter be maintained as a municipal institution.

Minnesota.—A Navy Hospital Corps Training School has been established in connection with the University of Minnesota Medical School. It was formerly opened on October 29, 1917, with an initial attendance of 100 men.

Nebraska.—The University Hospital, erected on the campus of the College of Medicine of the University of Nebraska, was formerly opened in October, 1917. It consists of 120 beds and was erected at a total cost, for the building and equipment, of $210,000. A new library building, an exact duplicate of the present library unit, is being erected on the medical campus which will house the department of physiology, pharmacology, and biochemistry. The funds were provided by the legislature which also appropriated $100,000 for maintenance for two years.

New York.—Columbia University College of Physicians and Surgeons has added a fifth clinical year to the medical course to be required of all students matriculating in and after September, 1918. The college has also opened its doors to women students. This was made possible by a gift of $50,000 from George W. Breckenridge, San Antonio, Tex., and a gift of $5,000 from an association of women physicians, and $18,000 from other donations. A new building for the use of women students will be erected and additional laboratories provided.

Cornell University Medical College has established a clinic for the functional reeducation of disabled soldiers, sailors, and civilians. This constitutes practically a new branch of medicine.

Long Island College Hospital, Brooklyn, has received $265,000 from the estate of Charles W. West.

University of Buffalo Medical Department has begun a campaign for funds for a new medical building and laboratories. A gift of $10.000 has been obtained to go toward current expenses for the year.

Ohio.—University of Cincinnati College of Medicine formally dedicated its new medical college building on March 25, 1918. Subscriptions were raised for this building aggregating $555,000.

On January 1, 1918, under the new charter for Cincinnati, all of the medical and scientific nursing work of the Cincinnati General Hospital was placed under the direction of the University of Cincinnati. The staff will be made up of members of the medical school faculty and secures for teaching purposes the facilities of the hospital.

Oklahoma.—The legislature appropriated $200,000 for a State hospital at Oklahoma City, to be under the control of the Oklahoma University School of Medicine. The building is rapidly approaching completion. The school of medicine has completed a new chemistry building at Norman, which has now been completed at a cost of $33.000.

Oregon. —The University of Oregon Medical School dedicated Mackenzie Hall, the first unit of the new group of medical buildings, on May 1, 1918. The building was erected at a cost of $117,000. It is on the new campus of 21 acres which provides space not only for other medical school buildings, but also for hospital sites.

Pennsylvania.—The University of Pennsylvania has received $50.000 from the will of Dr. William C. Goodell. The board of review has awarded damages of $714,000 to the University of Pennsylvania for the old Medico-Chirurgical College and Hospital property taken by the city. The Medico-Chirurgical property had been transferred to the University of Pennsylvania with the merger two years ago.

The University of Pittsburgh School of Medicine is receiving $100 annually from the Pennsylvania Association for the Blind to be used as a prize to the member of the senior class who writes the best essay on the prevention of blindness.

Tennessee.—Meharry Medical College dedicated the new Anderson Anatomical Hall on October 19, 1917. The $10.000 used in its erection was the gift of Dr. John W. Anderson, of Dallas, Tex.

Texas.—During 1917 an attempt by Gov. Ferugson to secure political control of the University of Texas and its medical department aroused a vigorous protest. A special session of the legislature was called; Gov. Ferguson was impeached; an appropriation of $1,629,407.17 for the university, including $197,500 for the medical department, which Gov. Ferguson had vetoed, was again passed; and three regents of the university named by Gov. Ferguson were replaced by those selected in the interests of the university.

Virginia.—The Medical College of Virginia has voted to admit women students. A new three-story hospital building is to be erected as a part of the new group of buildings for the Memorial Hospital. This first building will cost about $40,000 and will be used for contagious diseases. The money was donated by Maj. James H. Dooley.

Wisconsin.—The University of Wisconsin has received gifts amounting to $100,000, which, with an appropriation of $50,000 from the legislature of 1917, will be used to construct a new infirmary for the medical school.

Marquette University School of Medicine is conducting a campaign to raise $1,000,000 for endowment. Andrew Carnegie has agreed to give one-third of this sum provided the university raises the balance. The first evening of the campaign $175,000 was raised. A gift of 1,000 volumes to be added to the library has been received from the late John L. C. Cronyn, of Buffalo.

DEVELOPING MEDICAL EDUCATION IN CHINA.

In the spring of 1914, the China Medical Commission, representing the Rockefeller Foundation, was sent to China "to inquire into the condition of medical education, hospitals, and public health in China." This commission recommended Peking as the place where the first medical educational work should be organized. The China Medical Board was then organized, which took over the property of the Peking Union Medical College. The terms of the transfer provided for a board of trustees consisting of 13 members, one to be appointed by each of the six missionary organizations previously maintaining the college, and seven by the China Medical Board. Full support of the college was assumed by the China Medical Board on July 1, 1915.

The Peking Union Medical College was founded early in 1906 by various American and English boards of missions, following the Boxer outbreak. Substantial contributions toward the building fund were obtained from the Empress Dowager of China. The Chinese language was the medium of instruction. The college rendered valuable service in 1910–11 in connection with the serious outbreak of pneumonia and the epidemic of the plague. As a result of their work three members of the college staff were decorated with the Order of the Double Dragon. The college staff also rendered valuable military surgical work with the Imperial forces during the revolution of 1911.

The announcement of the new Peking Union Medical College, Peking, China, for the session of 1918–19, has recently been sent out. It contains a perspective view of the new medical school and its group of hospital buildings. These, when completed, will consist of 17 buildings, connected by covered corridors, and will occupy the space of about four city blocks. All but four of these buildings and two prospective wings of the medical school have already been completed. A premedical school was opened in September, 1917, and the medical school will be open for students in September, 1919. Graduation from an approved middle school of China, or its equivalent, in addition to 108 credit (semester) hours of college work, is required for admission. The premedical work includes courses in English, Chinese language and literature, algebra through quadratics, plane geometry, biology, chemistry, physics, Chinese and universal history, and drawing. The teaching year begins September 17 and will end June 20 of the following year. The announcement contains floor plans of the various college and hospital buildings.

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SECONDARY EDUCATION

By

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SECONDARY EDUCATION.

By Thomas H. Briggs,

Teachers College, Columbia University.

CONTENTS.—Character of school reports—Growth of high schools—The small high school—Consolidation and coordination—Larger use of the school plant—The high schools and the colleges—Failures and marks—Retardation, attendance, and elimination—High-school pupils—High schools for negroes—Secondary school teachers and principals—The tenure of teachers and principals—The training of teachers and principals—Supervision of instruction—Extension of function of high schools—The war and secondary schools—Farm service by high-school pupils—Military training in high schools—The future of the nigh school.

CHARACTER OF SCHOOL REPORTS.

A study of a large number of school reports, from both States and cities, reveals an astonishing variety in the size, the audience addressed, the content, and the use made of them. The size varies from pamphlets of a few pages to volumes of several hundred. In a number of instances a long report is published in several small sections, thus effecting economy and also insuring attention that might be repelled by a formidable volume. The audience is the board of education, the teachers, superintendents of other States or cities, the public at large, or nobody in particular. It would seem that in every case the persons to whom the report is addressed would be known, first of all, for their interests or needs should determine the contents of the report. It is difficult to see why any school reports should contain portraits of the members of the board of education, programs of the high-school graduating exercises, expressions of acrimony between school officers, unsubstantiated statements of "a most successful year," lengthy minutes that properly are recorded in the secretary's book, or complete unclassified details of expenditures. It is doubtful if most of the tediously gathered statistics can be justified when they occupy three-fourths of a report and are accompanied by no interpreting text and no indications that they have been or will be used.

When a report is definitely addressed to the public, it very properly contains general statements of progress, explanations of new features in the schools—such as supervised study and the longer school day or of extra-curricular activities—and arguments concerning the value of secondary or higher education. Supt. Stark, of Hackensack, N. J., in addressing the public, prefaces his detailed report by a summary of his recommendations of the preceding year, a list of the accomplishments during the year, and recommendations of what should be done in the future. A report addressed to the public may properly also present data concerning the high-school teachers—their preparation, experience, etc.—facts showing the holding power of the school, the percentage of failures, the size of classes, the cost of each subject per pupil, and the like, provided the tabulations are interpreted and an appeal is made that a proposed program of improvement be supported. It is certainly not economical to include in one volume for general circulation different kinds of material, each being of interest to only one of several audiences addressed. Of the State publications concerning high schools, it is not invidious to mention as peculiarly helpful for various reasons those from California, Illinois, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, South Carolina, and Wisconsin.

GROWTH OF HIGH SCHOOLS.

The State reports for the biennium contain less about the increase in the number of high schools than they have done for a number of years past. Especially in the older States and in the younger ones that have done most by way of educational advance there are justifiable expressions of pride that opportunities for secondary education are in the reach of the greatest majority of youth. The growth that is more emphasized is in the number of pupils and in their persistence in school. There are a number of expressions of opinion that no high schools should be established or maintained at the expense of the elementary grades and that in the secondary schools already established effort should be made to secure respectable work of higher quality. Typical of these expressions may be quoted the following passage from the fourteenth biennial report of the State superintendent of public instruction of Montana:

> While everything possible has been done and is being done to encourage high-school work in all schools equipped to do the work, and while the principals of the larger high schools have been most generous in their willingness to cooperate with these schools that are taking care of the boys and girls at home, it seems that a note of warning must be sounded or some districts in their zeal for high-school work will do their schools more harm than good.
>
> In the first place, many schools have asked teachers not well qualified to teach the ninth grade subjects, which is an unwise thing, for no instruction is often better than the wrong kind of instruction. Other schools hiring but one or two teachers have endeavored to start high-school classes. The best that can be said of the work carried on under these conditions is that it overworks the teachers, robs the boys and girls in the elementary grades at the very time when they are forming their like or dislike for the public school, and cheats those who think they are getting high-school work when they are not, and who believe that they are saving time when they are actually losing it. Still other schools with the number of teachers necessary to start high-school work fall short by trying to care for too many courses or too many

studies in one course, forgetting that thorough work in a few branches is better than slipshod efforts in many.

In planning for the best interests of the school, it must be remembered that a first-class elementary school means a good deal more to any community than a poor high school, and no attempt should be made to finance high-school work until grounds, buildings, and equipment are what they ought to be, and something in the way of music, drawing, industrial work, domestic science, and community activities have been provided for the grades.

The valuation of the school district should also be considered, and until this is what it should be, the thought of the first-class graded school with suitable equipment and a permanent and fully accredited high-school course can not be fully considered, for in the long run, carrying on a school of that kind is not a question of enthusiasm, of sentiment, or of need, but one of dollars and cents with which equipment can be provided and teachers paid.

When the proper valuation is in sight, whether it has been secured by consolidation or otherwise, the first year of the course best adapted to the needs of the community in which the school is located should be taken up and strictly adhered to until sufficient teaching force can be employed to carry on additional work.

The State inspector of high schools for South Carolina is even more emphatic and pointed in his remarks:

One of the first weaknesses a stranger would detect in the high-school system in South Carolina would be our small number of four-year schools in places amply able to support them, and the attempt of a few small places to support four-year schools with too few pupils and too little money. The number of the latter class is small, but of the former class there are too many. To maintain a four-year school there are three things necessary: Enough pupils to justify its existence, enough money to employ the teachers and to equip the school, and a community that appreciates such a school.

From the point of view of attendance it seems reasonable to hold that any three-year school with as many as 75 pupils is well able to maintain a fourth-year class. Seventeen of our schools last year had enrolled 1,816 high-school pupils going out with a three-year high-school education. Admittedly, those going to college are not prepared as they should be, and certainly those leaving school are entering life with meager equipment.

From the point of view of expense a few words ought to suffice. In September, 1916, these 17 schools sent from their third-year classes 194 pupils to college, one year behind the preparation required by high-grade colleges. In other words, these pupils went to college to get their fourth-year high-school training. At the conservative estimate of $250 each, these pupils cost their parents $48,000 for the privilege of sending their children away from home to get what they should have had at home. Worse still, it cost more to keep these 194 pupils at college a year than the 17 schools paid for teaching the entire high-school enrollment of 1,816. All this takes no account of the large number of boys and girls whose education closed with the third year of the high school. Why will people persist in such waste and folly? Once we heard that ancient alluring phrase about "saving a year at college," but surely thinking people are no longer caught with such bait.

The people of this State have had so little practical experience with well-equipped four-year high schools that they do not appreciate their value. For long years we have known nothing higher than a three-year high school resting upon a seven-year elementary school, and the people have come to look upon such a school as ideal. In fact, one occasionally hears the argument that such a school is enough for any people. Such advice reminds one of Æsop's unfortunate tailless fox. If the study of pedagogy has taught us anything, it has convinced us that we can not force the growth of the human plant. It requires time for the human plant to grow and mature. When we consider the comparatively small number of men and women with a college education, and the even smaller number with a four-year high-school education, we begin to understand the limitations of our people intellectually, industrially, and economically. South Carolina's having more college graduates than four-year high-school graduates furnishes amusement for everybody but us. We have not yet seen the amusing side of the situation.

In another part of his report Inspector Hand explains how the unfortunate condition came to exist in South Carolina, and recounts the changes in the law made in an attempt to remedy earlier mistakes. In 1907 South Carolina passed a law appropriating $50,000 to develop high schools.

Although the terms upon which State aid was offered to the individual schools were liberal, of the $50,000 appropriated for the scholastic year 1907–8, only $27,960 was used. Only 56 schools could be induced to take advantage of the new law. In the law was a clause granting to the trustees of a high school accepting State aid the power to levy a local high-school tax not to exceed 2 mills on all the taxable property of the district. In most instances local boards had to promise not to levy this tax before the people would vote for the establishment of a high school. It is interesting to note how many districts then reluctant to empower their trustees to levy a 2-mill tax have since voted 4, 6, 8, and even 10 mills for school support. In 1908–9 only $44,295 of the State appropriation was used.

Apprehensive lest the towns and the cities might get an undue proportion, if any part, of the State appropriation, the general assembly put into the first law an unfortunate clause forbidding the use of any of the appropriation in a school district containing an incorporated place of over 1,000 population. Small places with few pupils and small revenue were the only places encouraged by the law. The consequences might have been foreseen. These small places were prompted to undertake the impossible, to establish high schools without resources to maintain them. In order to put 2 teachers and 25 pupils, the minimum requirements, into the high schools, numbers of places crippled their elementary departments for years. To remedy this defect the law was amended so as to permit a high school of 1 teacher and 15 pupils to share in the State appropriation. Again the consequences ought to have been foreseen. Every school of 3 teachers that could possibly find 15 pupils for the high-school grades wished to become a high school. Not infrequently a high-school teacher would be found with 15 pupils, often fewer, while the 2 teachers in the lower grades would have from 30 to 50 pupils each, occasionally more.

Between 1907 and 1917 fifty-eight places undertook to maintain high schools, but gave them up.

At the beginning of the year 1916–17 all the one-teacher high schools were put into the rural graded school class, and the appropriation for that class of schools was increased. So far as making any contribution to a permanent system of high schools, the State's money spent on these one-teacher schools was a total loss. It was an expensive experiment financially, and one that had a deadening effect far worse than the mere financial waste. The one-teacher high schools put an immediate check upon all efforts at building up high-grade high schools at central points to serve small surrounding schools. The one-teacher high schools undertook the work of three and four teacher high schools, and parents seemed satisfied with the attempt.

Meantime the general assembly had, after a hard struggle, amended the law by increasing the maximum population limit from 1,000 to 2,500. With the census of 1910 twenty-five of the largest high schools in the State were debarred from any participation in the State high-school fund, although any high school receiving any of this fund had to give free tuition to any high-school pupil from that county. Year after year the lawmakers were urged to repeal this clause, but without success until 1916, when an entirely new law was substituted. The new law is much simpler than the old one. The population limit is entirely removed, a high school must have at least 2 teachers and 25 high-school pupils, the district must levy at least 4 mills local school tax for running expenses, any high-school pupil can without tuition attend any State-aided high school in his own county or an adjoining county, and the State appropriation was increased to $80.000 annually. The immediate effects of the enactment of the new law will be referred to in another place in this report.

State Inspector Walker, of North Carolina, recognizing the weakness in his State of the small, weak high schools, proposes a policy that should control them:

> There is needed a comprehensive policy, a plan backed by law, that will recognize in some way all worthy high schools operated at public expense, city and rural, and that will make possible the development of good high schools where high schools are needed and prevent the multiplication of weak high schools where high schools are not needed. It is impossible to build up an efficient high school in every crossroads community. It becomes necessary to concentrate our efforts in each county at a few centers where there is a quickened school interest, intelligence, and available means, all of which are necessary to the development of schools of the right kind. It might be advisable to extend State aid to all well-organized and well-managed four-year high schools of the cities and towns that admit pupils to the high-school grades from the country districts, State aid, of course, to be given under the requirements of the public high-school law and primarily on the basis of attendance from outside the local district. This matter, I think, is worthy of serious consideration.
>
> The State appropriation should, in a word, be used for four important purposes: (1) To stimulate counties and communities to initiate new and necessary lines of work which they would not be likely to undertake of their own accord, as, for example, putting in courses in home economics, agriculture, and teacher training; (2) to encourage counties and communities to inaugurate new and necessary policies, which they would not be likely to put into practice if left without direction, as, for instance, putting the high-school principals on salary the year round; (3) to encourage schools to maintain higher standards of excellence, as, for example, lengthening the school term, organizing the work on a sounder basis, employing better teachers, paying better salaries, etc.; (4) to equalize in some measure opportunities for high school training by helping to support good high schools where they are needed in counties and communities that have not the funds necessary to maintain good high schools.

THE SMALL HIGH SCHOOL.

It is a matter of judgment that many small high schools are generally doing poor work, but State Inspector Williams, of Indiana, has measured the product of the small and of the large high schools by their records in college.[1] Indiana has 94 public high schools for every 100,000 persons of school age, approximately two and a quarter times as many as New York, its nearest rival. "Of the 850 officially recognized high schools in Indiana, 51 per cent have fewer than four teachers and 71 per cent have fewer than five teachers." Thirty students from these small high schools and 85 from large high schools had the following distribution of marks in the freshman year at Indiana University:

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[1] Educator-Journal, 18: 222–228.

Percentage of marks.

	Small high schools.	Large high schools.
A	1.65	12.06
B	11.41	31.23
C	33.01	31.32
D	23.93	13.09
Conditioned	14.58	8.68
Failure	15.26	2.69

Inspector Williams found similar results in seven other Indiana colleges. Principal Smith, in his survey of Illinois high schools, however, found no such difference between the graduates of small and large schools. Whether the slight inferiority of the small high school in Illinois is due to the fact that in this classification are all schools enrolling up to 100 pupils or to other causes is not known.

Of course the academic success of those pupils who become college students is not the only criterion of the value of a high school. A multiplicity of small high schools certainly increases the number of pupils who enter upon secondary education; disregarding tradition, they may be adapted so as to satisfy peculiar local needs, and they may be made junior high schools and affiliate with a central school which will complement their work, or each one may form a nucleus which later may develop into something larger and more satisfactory. Mr. Williams, in his study, shows that in sections of Indiana abundantly supplied with high schools, small and large, the ratio of secondary school enrollment to the entire school enumeration is from two to four times as large as when the number of high schools is small.

The alternatives proposed for improvement are (1) a reduction and adaptation of the offerings by small high schools and (2) consolidation. The commissioner of secondary schools for California writes:

> In planning the course of study for small high schools it is not necessary to include all the subjects or courses taught in larger high schools. The law requires that the high school offer one course of study that will prepare graduates therein for admission to the State university. It does not require that the high school offer courses that will prepare graduates therein for admission to all of the colleges of the State university.

The State inspector of North Dakota writes similarly:

> Most high-school programs are too full. Too much is attempted, especially in the smaller high schools. Such a plan makes the limited teaching force attempt too much, and results in a lowered quality of work. In most small schools the superintendent or principal has to do so much class room work that he has neither time nor ambition to give the kindly, helpful, thoughtful counsel and assistance to the teachers both of

the grades and the high school which is so essential to good, satisfactory work. Many times the remedy is in the hands of the teachers themselves. Small classes could often be eliminated and some subjects alternated with profit to all.

In Vermont Commissioner Hillegas and in New Hampshire State Superintendent Morrison have consistently and cogently worked to make the small high schools contribute first of all to the assured needs of the pupils who are likely to have no further education. It should be remarked that in both States emphasis is laid on cultural as well as on the more immediately practical training.

CONSOLIDATION AND COORDINATION.

Consolidation in some cases, as in Vermont and Tennessee, carries with it a system of abbreviated or junior high schools, and in others, as notably in Illinois, an enlargement of territory to support a cosmopolitan high school. The program proposed by the Vermont survey has been improved and developed there, and the State superintendent of Tennessee writes:

> Until the last legislature we did not have a compulsory high-school tax. We now have a 5 cent high-school tax levied by the State in every county. Until this last year we had, where they had a high school tax, one centralized high school with disorganized inefficient secondary schools which you no doubt well remember. These schools never had a course of study or any regulations. As a result they began nowhere and lead nowhere.
>
> The last legislature passed a law providing for a centralized four-year high school with as many two-year high schools established over the county as may be necessary to bring the first two-years of the high-school work within reasonable reach of all parts of the county. The course of study in these schools is the same as the first two years in the centralized first-class school. This gives us a splendid high-school system.

The State inspector of high schools for South Carolina, in reviewing the conditions in each district in his State, repeatedly makes such recommendations as the following:

> A——— and B——— ought to put aside their petty local pride and unite in establishing a high school that might be the righteous pride of both places. Both districts would save money, and have such a school as neither alone can ever hope to have.
>
> In C——— the school has struggled hard under difficulties. An 8-mill tax for expenses brings in too little money from rural property returned at low valuation. Salaries are low, and the school is housed in a very inferior building. The school would be better off as a rural graded school.

Inspector Williams concludes the study previously quoted with the following paragraphs of recommendation:

> The writer proposes, as the highest type of aid by the State, either that in operation in California, where provision is made for separate and special taxation for the support of high schools, or that in effect in New Jersey, where the general school tax is drawn upon for a special apportionment to high schools. In the one case, the annual high school levy is determined by multiplying the number of pupils in average daily attendance by $15—a State-wide tax of approximately 1½ mills. In the other, the special apportionment is made to high schools on the basis of $400 for every teacher employed

> and of a fixed sum per pupil per day of actual attendance. Some such system in Indiana would prove a powerful stimulus to the maintenance of standard conditions and equalize the high-school facilities in every part of the State.
>
> Fortunately, Indiana school law has made notable progress in the direction indicated. Legal provision exists for union or consolidation of the following varieties:
>
> (1) Joint high schools. On the petition of a definite number of legal voters of two or more school corporations, an election must be called to determine the desirability of maintaining a joint high school. If favorable, the two corporations may unite in one of the following combinations:
>
> (*a*) Joint town (or city) and township high school. In this case, cost of maintenance is apportioned in proportion to the taxables of each corporation, and the school is managed by a joint board.
>
> (*b*) High-school district. A city (of any class) or incorporated town may establish and maintain jointly with one or more contiguous townships (or portions thereof) a high school district. Maintenance and management as before. Provision is made for voluntary withdrawal at any time from the arrangement by any member of the district.
>
> (*c*) Joint township high school. Two adjoining townships, having a combined taxable valuation of three quarters of a million dollars ($750,000), may establish and support a joint high school, provided no high school already exists in either corporation and eight or more pupils have graduated from the common schools in each of two previous years.
>
> (2) Consolidated high schools. Under similar conditions, a town or fifth class city and the adjacent township may consolidate two or more existing high schools. Two plans of management are provided:
>
> (*a*) A new board consisting of the township trustee and two persons chosen by town or city council—one of these a resident of the city or town and the other of the township outside.
>
> (*b*) A joint board composed of the township trustee and secretary of the school board, with appeal to the county superintendent.
>
> Thus ample legal sanction exists for communities to combine resources and unite for high grade working conditions.

As is well known, Illinois has gone further in the establishing of consolidated high schools than any other State. The story of the development of its township high schools, a type that might well be adopted in other sections of the country, is told by University Visitor Hollister in Bulletin 25, 1917, of the United States Bureau of Education, and many interesting data are presented in Principal Smith's Survey of Illinois High Schools. The law permitting the organization of a high school in contiguous territory regardless of political boundaries, under which nearly 200 new schools were established, was in 1917 declared unconstitutional; but the next legislature promptly passed a better act. Of the present situation State Supt. Blair writes:

> All of the territory of a county not included in a recognized high-school district is considered nonhigh-school territory. A board is elected within this nonhigh-school territory and levies a tax to pay the tuition of all eighth-grade graduates residing within the nonhigh-school territory. An unusual and most effective plan is provided for taking care of the two and three year high schools. In many of our mining villages and smaller communities the people desiring to keep their children at home during the first years of the high-school course sought to maintain a high school and an elementary school on the one tax of 1½ per cent on the assessed valua-

ion of the property. In almost every instance it was found that to maintain such a high school meant the shortening of the elementary school, the lowering of the wages paid the teachers and the consequent reduction of elementary-school opportunities. Now, this new law places all recognized two and three year high schools within the nonhigh-school territory. All of the funds within these local two and three year high-school districts is to be used for the elementary schools and they are taxed with the rest of the district for the payment of the tuition of all the eighth-grade graduates within the nonhigh-school district. All the children attending these two and three year high schools have their tuition paid out of this fund. If a two-year high-school district has 20 pupils enrolled, it receives 20 times the per capita cost of maintaining the high-school courses. If a three-year high school has 35 pupils, it receives 35 times the per capita cost of maintaining the high-school courses, all paid out of the nonhigh-school tuition fund. You will note that the provisions for forming community high-school districts is much better safeguarded than under the law of 1911, which was declared unconstitutional by the supreme court.

In Kentucky adjacent counties have been given the privilege by the legislature of combining for the establishing and maintaining a joint high school covering a territory larger than the single county as an educational unit. The congressional district high schools of Georgia are well known. And in North Carolina there are the farm-life schools. Of these State Supt. Joyner says in his recent report:

Since the amendment to the farm-life school law, allowing any county that will provide the required equipment and an annual maintenance fund equal to the amount received from the State to avail itself of the State appropriation not to exceed a maximum of $2,500 for instruction in agriculture, sewing, cooking, household economics and other farm-life subjects in connection with one or more of its rural high schools, 9 new farm-life schools have been established during the biennial period, making a total of 21 such schools in 17 counties of the State. No part of the annual maintenance fund for these schools or of the funds for their necessary equipment is allowed to be taken out of the regular school funds and to shorten the regular public-school term until those funds are sufficient to provide a minimum of six months. The significant and hopeful fact about their establishment through the cooperation and sacrifice of the people of the communities in which they are located is the evidence that it furnishes of intense interest in the education of country boys and girls for country life, and of the faith of the country people in a sort of education and school that can and will provide better preparation for more profitable, more comfortable, more healthful, more joyous, and more contented living in the country.

The progress of centralized schools in North Carolina and the program for the future is set forth as follows:

Under the law and the rules adopted by the State board of education not more than four of these schools can be established in any one county. No public high school can be established except in connection with a public school having at least two other teachers in the elementary and intermediate grades, and the entire time of at least one teacher must be devoted to the high-school grades. No public high school can be established in a town of more than 1,200 inhabitants.

Each district in which a public high school is established is required to duplicate by special taxation or subscription the amount apportioned to the school from the State appropriation; each county is required to apportion to each public high school out of the county fund an amount equal to that apportioned to it out of the State appropriation. The minimum sum that can be apportioned annually from the State appropriation for the establishment and maintenance of any public high school is $200 and the maximum sum $600. The total sum annually available for any public high school established under this act ranges, therefore, from $600 to $1,800. The high-school funds can be used only for the payment of salaries of the high-school teachers and the necessary incidental expenses of the high-school grades.

There are now from one to four public high schools in each of 96 counties of the State. There are therefore four counties in which no public high schools have yet been established. For the proper maintenance and development of these high schools more money will of course be required.

It is our hope to be able to select the best high school in each county, taking into consideration the location, the accessibility, the environment, etc., and develop this into a real first-class county high school, doing thorough high-school work for four full years and some vocational work in agriculture, sewing and cooking, and other rural-life subjects. Around this school should be built a dormitory and a teachers' home. The dormitory, properly conducted, would afford an opportunity for the boys and girls from all parts of the county to board at actual cost. Many of these could return to their homes Friday evening, coming back Monday morning. Many of them who do not have the money to spare to pay their board would probably be able to bring such provisions as are raised on the farm and have them credited on their board at the market price. A small room rent could be charged each student. The principal's home would make it possible to secure a better principal and keep him probably for years, thereby giving more permanency to the school and more continuity to the work, making a citizen of the teacher and enabling him and his family to become potent factors in the permanent life of the community, contributing no small part to uplifting it, morally and intellectually, by their influence. Then the other high schools in different sections of the county should be correlated with this central school, and the course of study in these should be limited probably to not more than two years of high-school work, requiring all students desiring to pursue the last two years of the four-year course to attend the central county high school, which will be fully equipped in all respects for thorough high-school work.

Thirty-nine of these public high schools now have 46 dormitories, in which more than 18 per cent of the county high-school pupils secure board at actual cost and pay for it in money or in provisions at the market price.

That the effect of consolidation has not everywhere proved satisfactory is evidenced by the following quotation from the 1917 report of the inspector of high schools in Minnesota. There for several years a law has been in force making possible the affiliation of a number of rural schools with a central school of 12 grades, one superintendent overseeing all the work.

> As a State-wide policy, association of rural schools with a central school as a means of improving the rural schools is not satisfactory. The superintendent of a village or city school system is, by training, experience, and lack of first-hand interest, unsuited to the task of supervising rural schools. The exception proves the rule. Withdraw State aid for association, and the entire fabric which has been building for eight years would fall to pieces. In few places has it brought lasting good to either party to the contract. The villages and cities will never succeed in making over the rural school or otherwise materially improving rural-life conditions. Like the rest of us the farming people must and will work out their own salvation. The great benefits which we expected from association were to come as the result of closer and more skillful super-

vision. But, with a few notable exceptions, we have accomplished nothing for the improvement of the rural school and have wrought injury to the central school itself by scattering the time and interest of the superintendent over too large and diversified a field.

It should be evident to even a casual reader that all programs for consolidation more or less tend toward a centralization of authority. Whenever funds are supplied from a central source, direction of work naturally follows. Repeatedly in the report are found "the course of study as outlined or approved by this office," and similar phrases. No theme was more frequently or emphatically presented at the Atlantic City meeting of the Department of Superintendence than the necessity of State and Federal aid to schools in order not only to equalize the opportunities for education but also to safeguard the interests of the larger political and social units. The tendency and the underlying sentiment toward centralization are strong; before induration they should be carefully and fully considered as part of the new national program.

LARGER USE OF THE SCHOOL PLANT.

Another tendency manifested in the reports of the biennium is toward a more complete use of high-school buildings. The marvelous increase in registration during the past years has made it obvious to the observant that even the ambitious building program could not long satisfy the demands upon it. Now, partly because of the great enrollment in secondary schools and partly because the war has very generally put a stop to new construction, there are numerous reports, especially in eastern cities, of high-school buildings being occupied more or less all day by two or more platoons of pupils. This duplicate use of high-school buildings is found very generally in New York City and also in Schenectady, Jamestown, and Erie, N. Y.; New Haven, Conn.; Paterson and Jersey City, N. J.; Chelsea, Mass.; Kansas City, Mo.; and Dallas, Tex. Many cities report that in the high-school building are held public meetings of various kinds; in Stamford, Conn., for example, during 1916–17 there were in the high-school building for the public 15 lectures, 39 receptions, 18 entertainments, 22 civic meetings, and 8 "other functions," with an estimated total attendance of 16,900. More and more high-school buildings are open for evening schools, for summer schools, and for other activities during the vacation months. The Washington Irving High School in New York City, for example, during the summer of 1918 was used as a regular academic summer high school; as a school to fit adult women for Government service; as a recreation center, using the gymnasia and roofs for play and dancing and the assembly hall for concerts; as a community forum, where various groups met for the discussion of public questions; and as quarters for university extension courses.

THE HIGH SCHOOLS AND THE COLLEGES.

Less than formerly is being said about college entrance requirements, partly because the colleges have, from time to time modified their demands, partly because a larger number of high schools, usually the small or the weak ones, attempt for all pupils nothing but what is required for entrance to college, and partly because many other secondary schools are differentiating their work, preparing some pupils for college and others for the immediate demands of society. The most significant changes regarding college entrance during the biennium were probably the new requirements of four prominent women's colleges of the East and the decision of the North Central Association of Colleges and Secondary Schools, in the territory of which is 55 per cent of the high school population, not to participate further in the National Conference on Uniform Entrance Requirements. It is stated that now not more than 15 per cent of the students who enter college do so by passing admission examinations.

The criticism by colleges of the high schools and their work has been very neatly turned by Inspector Hand, of South Carolina, in his annual report for 1917:

> Much has been said and written in recent years about the increased requirements for college entrance. The requirements have been increased. But there is another side to the matter—one that is very rarely mentioned. What advance has been made in the standards of the colleges beyond the entrance requirements? How much higher grade of work is the freshman class doing? How much higher grade of work is the senior class getting? A close comparison of some of your catalogues for 1909-10 with those for 1916-17 reveals a curious, if not incongruous, state of affairs. Colleges that have within that time almost doubled their published entrance requirements are doing almost the same work they did seven years ago. For illustration, take the subjects that are fairly well graded, such as mathematics, Latin, and English. In numerous instances the wording describing these courses has not been changed in years. In many instances the textbooks have not been changed. In others the textbooks have been changed only as to authors. In still others considerable changes have been made in the freshman and sophomore work with very few in the junior and senior work. This situation explains how pupils from ordinary four-year high schools are still getting into the sophomore class with discouraging frequency.

He goes on to point out that all of the 15 colleges of South Carolina that "require" 14 units for admission are not justified in so doing by either their own work or by that of the high schools of the State, and that in the freshman class of these colleges there are 146 per cent of the number of pupils in the fourth year of high schools in the State in the preceding year. Fully one-half of the freshmen entered *on condition.*

> Your patrons and the public have a right to know just how these conditions are removed. In how many hours do you work off two units of conditions requiring in the high school 240 sixty-minute hours? Who does the work and in what manner is it done? Show the public in your catalogues how it comes about that a 12-unit student with two units to make up can graduate on schedule time with the 14-unit

students without hurt to either. What effect is the plan going to have on the maintenance of four-year high schools? It is already telling against them.

The criticism is quoted at length because of its pertinency to conditions in several other States as well.

There is evidence of an increasing effort by the high school to inform elementary pupils of its offerings and opportunities. Some cities (e. g., Milwaukee) publish handbooks for the information of eighth-grade pupils; and many others (e. g., Decatur, Ill., and Dallas, Tex.) publish similar handbooks that are distributed to the incoming freshmen in order that they may quickly adjust themselves to new conditions. In Cleveland, Ohio, the seniors in different high schools are reported to have visited the eighth grades from which they came and there to have made brief talks on the benefits of high-school education.

Data in numerous reports indicate the growth of a more critical attitude of schoolmen toward their work. Statements of "impressions" and of untested experiments are more and more giving way to records substantiated by standard measures and by definite figures. Because of the complexity of the aims in secondary school subjects, few standard measures have so far been developed; but in several surveys and city reports are the scores of high-school pupils in spelling, in composition writing, in reading, and in algebra; the Ayres, Hillegas, Kansas or Thorndike, and Monroe or Rugg and Clark measures being used. When the purposes of each phase of secondary education have been more clearly defined, we may expect the development of tests adequately to measure accomplishments of all kinds.

FAILURES AND MARKS.

It is interesting to note the concern that is now being taken by school administrators with failures and school marks. The academic studies concerning these topics, startling and disappointing as they have always been, are now being applied widely to reveal information that will lead to the improvement of school work. El Paso, Tex., Stamford, Conn., Paterson, N. J., Topeka, Kans., and Altoona and Johnstown, Pa., are cities that have published in their annual reports studies of failures in their high schools. Supt. Cary included in "Education in Wisconsin" a study by Jeanette Rankin of the number and per cent of pupils dropped, failed, and promoted in 75 high schools of the State. This is the most comprehensive of recent studies. It shows that for the 75 high schools 10 per cent of all the student-hour work was dropped and 9 per cent failed. As usual, the worst records were during the first year, in the more conventional subjects, and by the boys.

A study of the marks recorded by subjects and by teachers frequently leads to a revision of the marking system. The story of how this happened in one school is interestingly told by Supt. Camp, of

Stamford, Conn., in his report for 1917, and afterwards more elaborately in the School Review. The weighting of marks so that they will give qualitative as well as quantitative credit seems to be widely accepted, and individual schools report that the plan when used has given satisfaction. In Chicago Supt. Shoop recommended shortly before his death that credits of increasing weights be given by the high schools for the subjects from freshman to senior. This would be a variation of a rather widespread practice of denying a pupil the privilege of taking for credit any academic subject listed in the curriculum more than one year above or below the class in which the pupil is.

RETARDATION, ATTENDANCE, AND ELIMINATION.

Closely related to a consideration of failures and marking systems are the studies of retardation, attendance, elimination, the source of high-school pupils, and the immediate destination of the graduates. Age-grade tables have for a number of years been common in reports on the elementary schools; they are now appearing with increasing frequency in the sections concerning the high schools. The worth of such a study is determined, of course, by what results from it; there is no apparent value in merely collecting and publishing the figures. One superintendent very properly is pleased with the number of over-age pupils in the high school, as he had made a special effort to recruit for further study young men and women who had prematurely left school for work; another administrator would with equal propriety be so disturbed by such a showing as to make a study of the efficiency of the grammar grades. Several schools report the number of pupils who are present for different proportions of the semester, but not one of them correlates the data with the facts concerning success in school work, and not one of them presents any program for improving the attendance.

One of the most pleasing results of the secondary school development is its increased holding power. In scientific studies the term "persistence" is replacing "elimination." The losses between the beginning of the ninth grade and graduation, however, are still very large. Pickell and Winkelblech, using a rough measure, have showed that in the States the highest percentage of the freshman class to be in school four years later is 54, in Indiana; the lowest, 17, in the Carolinas. For the United States the percentage is 38. In New York City, where a large number of pupils are said to enter the high schools to await the time when they may secure working papers or to ascertain by sampling whether they will like the work or not, the percentage is as low as 21. Supt. Cary reports that in 1916 the enrollment of Wisconsin high schools was distributed as follows: Special students, 1; freshmen, 34; sophomores, 29; juniors, 20; seniors, 16. Of the 16 seniors, 14 graduated.

Inspector Meredith records the progress of the class entering New Jersey high schools, as follows:

Year.	Grade.	Number.	Per cent.
1914	IX	16,998	100
1915	X	11,057	65
1916	XI	8,072	47
1917	XII	6,502	32

El Paso, Tex., La Crosse, Wis., Paterson, N. J., Topeka, Kans., and other cities present tables showing the number and percentage of elimination by semesters and by causes; and Kansas City, with its efficient bureau of measurements, publishes a comparative table that contains the approximate percentage of all pupils entering the public schools who complete the high-school course in 17 cities. The range is from 7.3 and 7.4, for Newark and New York, to 25.8 and 25.9, for Portland, Oreg., and Seattle. "In 1891," the Kansas City report continues, "only 4 per cent of our pupils who entered the elementary schools completed the high-school course, but in 1917 this per cent had increased to 19.8." The Kansas City report for 1917 also shows the percentage of high-school pupils dropped annually from 1900 to 1917. The median percentage for the 19 years is 20.1, with a probable error of 1.1; however, the average for the last 9 years is 19.4, or 1.4 per cent less than that for the first 9 years of the period.

HIGH-SCHOOL PUPILS.

In "Education in Wisconsin," we are told the source of high-school pupils. In the whole State—where, by the way, 17 per cent of all city pupils are in high school, as compared with 7 per cent of all country pupils—63 per cent of the pupils entering secondary schools in 1915–16 come from local city elementary grades, 2 per cent from the elementary grades of other cities, 7 per cent from State graded schools, 18 per cent from rural schools, and 10 per cent from private and parochial schools. Of the graduates in 1915–16 of the eighth grades of Wisconsin, 46 per cent entered high school from the rural schools, 41 per cent from the State graded schools, 85 per cent from the village grades, and 85 per cent from the city grades. These figures, while encouraging as indicative of progress, show that there is still much to be done even in such favored communities to equalize opportunities for secondary education. Such information should be had for many cities and States, so that a new national program may be soundly based on facts.

No less important than the source of our high-school pupils is what becomes of them immediately after they graduate. The most complete recent study seems to be that in the Des Moines Public

School Pupil and Employment Vocational Guidance Bulletin No. 2. 1916. In this we are given a summary of the study of 380 graduates of the public high schools in 1914, supplemented by a tabulation of the overambitious plans of the senior class for their immediate future, of the occupational distribution of the parents of children attending high schools, and of what the employers of graduates have to say about them. Other tabulations of the occupations of parents of high-school pupils are given by Thorndike and by Koons in Educational Administration and Supervision. Those who believe that the primary duty of the schools is to prepare their pupils to perform better the desirable activities that they are likely to perform any way will find in such tabulations much information to influence the reorganization of courses of study.

HIGH SCHOOLS FOR NEGROES.

One phase of secondary education has never been fully considered, that of negro boys and girls. In the South, where enough negro pupils desire secondary education to warrant it, segregated high schools are established, but the curricula and courses are often not well adapted to the peculiar needs of the pupils. The provisions at St. Louis must be cited as conspicuously good, however. Frequently the equipment is poor and the content of the courses highly academic. Age-grade tables, as those from El Paso, show the negro pupil considerably retarded, and the elimination everywhere is high. In Louisville, Ky., for 1915-16, only 10 per cent of the students were enrolled in the senior class, and the sophomores were 44 per cent of the number enrolled as freshmen. In the whole State of Kentucky in 1916-17 there were 32 negro high schools, with an average enrollment of fewer than 41 pupils, 1,225 negro pupils for the entire State. Half of the entire enrollment was in the freshman class and only 9.4 per cent of it in the senior class. It should be noted that in these schools the average value of the equipment for manual training and domestic science was less than $700, ranging from $25 to $2,150. The per capita cost for conducting the 32 schools was $12.

In the North, negro children when they apply are admitted to high schools with little or no distinction because of their race or peculiar needs. Some years ago Mayo showed that in one of the New York City high schools the negro pupils, although a very highly selected group, did work inferior to that of the white pupils. In the 1917 report of Supt. Wilson, of Topeka, Kans., there are tables presenting the facts concerning withdrawal and failure in the high school of negro and white pupils by subjects for several semesters. The tables are prefaced by the statement:

> The facts shown in the following tabulations I am reporting with regret. The tables show an abnormally high per cent of failures among the colored pupils. * * * The facts are that the colored pupils show a lack of efficiency somewhere in the system. The problem is not one for the cheap politicians or the demagogues of either race.

The facts presented seem to show that in the Nation as a whole the conditions of secondary education are not as satisfactory for the negro pupils as for the white. If the State affords education not as a luxury for the individual, but rather as a serious investment for the return which will come to itself, it can not safely neglect any important group of its people.

SECONDARY SCHOOL TEACHERS AND PRINCIPALS.

Before the declaration of war by the United States the movement for improving the quality of secondary school teachers was strong. Many States, particularly those in the North Central Association territory or contiguous to it, had adopted for high schools standards which included one or more items concerning the preparation and experience of teachers; and the inspectors in several reports stated that the quality was steadily improving. The legislative committee of the Kentucky Educational Association in 1917 passed the following resolution:

> Since the rules and regulations of the State board of education, under the requirements of statutory law, fix the minimum academic scholarship of teachers in standard four-year high schools at the equivalent of high-school graduation plus two additional years' training in normal schools or colleges, we favor the enactment of these regulations into statutory law for the advice and government of boards of education and trustees throughout the State.

Washington has raised its requirements for high-school teachers to a complete college course which includes 12 semester hours in education; and the State superintendent of Utah announces in his report for 1916 that:

> The State board of education has wisely increased the requirements for certificates to teach until at present high-school teachers must have completed a standard college course of four years, and this must include, or the applicant must have in addition to his degree, after June 30, 1917, one year of professional work, 18 hours of which must be strictly educational subjects.

This is essentially the requirement of California, a State which for a number of years had led the country with its standards for teachers of public high schools. Even Louisiana, the schools of which have been handicapped by extremely inadequate appropriations, adopted in 1916 a standard that will be gradually raised until the minimum requirement for teachers in high schools is graduation from a four-year college or university course. This standard can hardly be attained unless the State makes a material increase in salaries for high-school teachers, the average at that time being $680. As an illustration of a practical set of requirements, those from New Hampshire are given, together with the introduction, both from Circular No. 1, 1917.

> At this time it is impossible to obtain secondary teachers trained for their work. We will accept this condition for the present, but we must insist that teachers have no other capital defect beyond their ignorance of the teaching process. We have

long demanded that they be satisfactory in character and in mentality. We must now insist that they have in addition sufficient maturity and experience to make them leaders of young people, and sufficient knowledge so that they may guide them. This department plans to uphold superintendents and headmasters in their efforts to secure only qualified teachers, and to this end will make the specific approval of the teachers engaged a preliminary to the approval of the school.

The following schedule is published to enable school officials to determine the general education and the special training to be required of candidates. It will be noted that in two notable particulars this statement differs from those given before. (1) A real requirement is set for the education of teachers of commerce. The commerce courses have been the least successful and the least honored of secondary courses, and a common reason is that the teachers have seldom been the equal of the teachers in other courses in education, in experience, or in maturity. This requirement is designed to prevent the approval of such teachers. It is desirable that schools drop their commerce curriculum if they are unable to secure qualified teachers. (2) The second change is in required special preparation. It is insisted that teachers be not assigned to teach subjects with which they are not familiar.

General education required.—Teachers must have a bachelor's degree from an approved college.

Exceptions.—Teachers who have studied four full years in approved schools of post-secondary grade.

Teachers who were in service in New Hampshire approved secondary schools prior to July 15, 1905.

Teachers of modern languages who have received adequate European or other training. Individual cases to be approved by the department. Provided in this and the three cases following that not less than 80 per cent of their teaching be in their specialized subject.

Teachers of domestic arts who have pursued at least three full years of post-secondary study in approved special institutions.

Teachers of commerce who have pursued at least two full years of post-secondary study in commerce in approved special institutions. In addition they must have two years of general post-secondary study, of office work or of successful experience in teaching.

Teachers of mechanic arts with scholastic and practical preparation sufficient for needs of their work. Individual cases to be approved by the department.

Teachers holding Grade B certificates whose work is restricted to grades seven to nine, except as specifically approved.

Teachers who have one, two, or three years of post-secondary study in approved institutions may be approved to teach courses not above the corresponding years of the secondary program.

Teachers who fail to meet the above qualifications but are now teaching with success in approved New Hampshire secondary schools. Individual cases to be approved and the courses that may be taught to be specified by the department.

Special preparation required.—Teachers must be prepared by two or more years of post-secondary study of each subject they propose to teach, such study to include the branches of the subject presented in the secondary courses.

Exceptions.—Teachers who have but one or two classes in a subject may be prepared by one year of post-secondary study of that subject.

Each year of post-secondary study may be replaced by two years of successful teaching of the subject in approved secondary schools.

For inexperienced teachers the department may waive the minimum requirement for one class only. Individual cases to be approved.

These illustrative standards are much more encouraging, however, than the reports of actual conditions. The progressive State of Wisconsin reports that, in 1916, 79 per cent of its high-school teachers in cities, and 56 per cent of those in county high schools, were graduates of colleges or technical schools, no account being taken of the standing of these higher institutions. Pennsylvania reports that only 46.2 per cent of its high-school teachers were in 1917 graduates of colleges. State Supt. Morrison makes a frank statement of the conditions in New Hampshire:

> Of the 507 different teachers employed in secondary schools of all classes approved by this office for the school year 1915–16, 393 or 77.5 per cent were graduates of colleges which grant the bachelor's degree. Of the remaining 114, the large majority were instructors in practical arts subjects judged to have had the requisite special training for instruction in the subjects which they teach. Twenty-five were teachers of modern language and other liberal arts branches who were not college graduates but who had prepared themselves by special study for instruction in their chosen fields and were deemed to have had the full equivalent of college graduation. The remainder of the 114 were graduates of normal schools or equivalent institutions teaching in junior high schools or third and fourth class high schools. Ninety-three per cent of all teachers of liberal arts branches in first-class secondary schools were graduates of colleges.
>
> We have less than a dozen teachers of modern languages in the State who are thoroughly competent in education to teach modern languages in a high school, but most of the remainder are passably competent; less than 20 who are thoroughly competent for science; less than half a dozen for history; a dozen for mathematics; a very few for Latin; almost nobody in English unless the pedantic conception of the language and literature of the mother tongue which most of them bring from college is competency. And yet the teaching staff of our secondary schools is better educated to-day than it was 20 years ago, when it was no uncommon thing for teachers to be employed for high schools whose education had been limited to that of the schools in which they taught.
>
> We have still in this State, as in most States, a secondary teaching staff which is wholly untrained. Not one per cent of the secondary teachers of the State have ever had any professional training at all comparable to what 44 per cent of the elementary teaching force has had. A few have taken courses in education in college, and that is a help.
>
> There are reported 147 persons teaching in the secondary schools of the State in the school year 1915–16 who graduated from college in 1914 or 1915. This is more than one-third of all the college graduates teaching during the year, and the same proportion practically would hold for the noncollege teachers. That means that you turn over your boys and girls at their most impressionable age to striplings who are without training or experience, who have no notions of teaching except those which they bring with them from college; and who in most cases have no intention whatever of teaching beyond the few years which form a fitting interlude between college and matrimony. We wouldn't deny them the latter, but we do think that if they are going to teach at all they ought to learn how to teach just as do the girls who are two years younger and who are teaching in the elementary schools.
>
> Our notebooks and records of inspection tell a wretched tale of the farcical instruction commonly found in the classrooms of these young teachers, particularly in English, both language and literature, in history, in languages and in science. Ordinarily teaching consists in assigning pages out of an incomprehensible textbook

or dictating from a college notebook. And this to boys and girls of an age which need skillful teaching beyond any age other than that of the primary school.

Of course, there is found the occasional "born teacher," and, on the other hand, anybody who has the mentality to have won through college improves through experience. But the point of view is prone to remain permanently formalistic, and it too often rapidly becomes pedantic.

In order that administrators might have some index of the kind of teachers the different colleges are furnishing the schools of New Hampshire, Dr. Morrison has asked the several superintendents and principals of the State to rate their teachers who were recent college graduates. The following instructions were used:

> In rating use the letters A, B, C, and D. Use A for a teacher who is all that you could reasonably ask, efficient in practice and possessed of an understanding of what she is doing and why she is doing it. Use D for teachers who were incompetent and ought to have been dismissed or were dismissed. Use B and C for grades between. A "B" teacher may be thought of as characterized by the term "Good average." A "C" teacher is one who is rather below the mark and ought to be dismissed unless she improves, but in whose case there is ground for hope that she will improve. She is not incompetent. Mark critically and severely.

These ratings for the whole State are tabulated by colleges and published.

State High School Inspector Hand, of South Carolina, makes an even more depressing statement of facts as he sees them in his State:

> To anyone familiar with the conditions that obtain in many places throughout the State, it is simply amazing to see the absolute indifference of the people as to the qualifications of those who teach their children and fleece them of their money. Men and women innocent of any charge of education, without any aptitude to teach, and without any experience are put in charge of schools, in the face of the fact that they are to have little, if any, supervision. It is safe to say that there are in South Carolina 500 white teachers holding legal certificates to teach who could not make a grade of 50 per cent on the studies of the eighth and ninth grades of our public schools, if examined as rigidly as are the pupils of these grades in the best schools of the State. It would be unsafe to say how many white teachers are holding certificates granted on all manner of pretexts, from long experience (successful or unsuccessful) down to two weeks' enrollment at some summer school. Notwithstanding the fact that almost anybody can get a certificate to teach school, there are in the public schools not fewer than 100 white teachers drawing salaries without any semblance of legal authority to teach. Some of them have been teaching from 10 to 20 years without a certificate of any kind.

These statements have concerned the teachers of entire States. From the following quotation from the 1918 report of Associate Supt. Tildsley, of New York, it seems that even cities where the highest absolute salaries are paid are suffering materially from the low quality of new teachers entering the high schools. Abnormal business conditions are not the only cause.

> We have experienced this past year an increasing difficulty in securing men teachers of the personality and training New York City has a right to demand in the teachers of its youth. The rapidly mounting cost of living has so reduced the purchasing

> power of salaries that men, and especially married men, can not live on the salaries which were fixed on the basis of a much lower cost of living. While teachers' salaries have been reduced through the operation of rising prices, opportunities for employment at rising salaries have been opened up in business, with the result that not only is the supply of men teachers being cut off at its source, namely, the graduating classes of our colleges, but teachers now in our schools are being drawn away by the larger salaries paid in other occupations. Unless the high-school pupils in this city are to be taught entirely by women or by men of inferior personality inadequately trained, and without the character and the qualities of leadership which are needed in those who are expected to train our boys and girls for the responsible duties of citizenship, a very considerable increase in the salaries of high-school teachers must be made. Much as we all deplore the constant increase in the tax rate, the people of New York must realize that in this city, with its large foreign population, the cost of education must be reckoned a first charge on revenues.

It needs only a casual comparison of the so-called salaries of schoolteachers with the wages now received by men and women in the world of industry and commerce to explain these conditions and others equally bad, though for various reasons not presented in school reports.

THE TENURE OF TEACHERS AND PRINCIPALS.

However good teachers and principals are, schools can not be satisfactory unless tenure in the same position continues over a considerable period. In Wisconsin the median length of experience for all high-school teachers was in 1916 four years; the median length of service in one locality was one year or less. In Pennsylvania the story is only a little better: Half the teachers who are graduates of colleges have taught five years or less, and half of those who are only graduates of normal schools have taught only two years longer. The condition in small high schools is everywhere pitifully bad, changes of teachers occurring with great frequency, and supervision being negligible. From California, where salaries are relatively high, come the following report and recommendations:

> The commissioner has compiled data showing that the tenure of principals and teachers in the small high schools is all too short. Of the 32 small high schools established previous to 1911-12, 6 made no change in the principalship during the four years ending June 30, 1916; 11 made two changes; 12 made three changes; 2 made four changes; and 1 made five changes. The average tenure of principals was a little over two years. These schools in 1915-16 employed 104 assistant teachers. Of this number only 10 were teaching in California high schools in 1911-12. It would seem therefore that the small high schools are taught for the most part by teachers with little experience. By fixing the minimum salary of principals at $1,600 per annum, for example, which is $100 less than the average now paid, and advancing the salary $100 per annum until a maximum of $2,000 is reached, school boards in charge of small high schools will undoubtedly be able to retain the services of principals for a term of years. It is desirable that high-school boards be authorized by law to employ principals for a four-year term after one year of probationary service.
>
> When we consider teachers' salaries, we find a similar situation. Good teachers are in demand and better salaries attract them. By adopting a salary schedule based upon experience the school board will establish a condition favorable to the retention

of teachers by the district for a longer period. The commissioner suggests that the minimum salary in small high schools be fixed at $1,000 per annum, and that provision be made for an increase in the salary annually until a certain maximum is reached. The additional amount paid to teachers under this plan will yield better returns to the community than the same amount expended for an additional teacher.

New Hampshire has a worse story to tell:

> The teaching force is very unstable. Very nearly two-fifths of all our secondary teachers were new to their places last year. Three-fifths were holding their positions for the first or second year; 37.4 of the college graduates had held their degrees for less than two years. This proportion holds year after year, and the situation is almost fatal to the efficiency of our higher institutions. Only about 9 per cent of our whole secondary teaching force were graduated from a New Hampshire institution. With rare exceptions, the remaining 91 per cent have no stake in New Hampshire, they are not personally the best of material, they do not understand our ways, and naturally they move at the first opportunity.

The situation in Massachusetts is graphically told in the two accompanying tables, the first showing the length of tenure of principals in each class of high schools, Class IV being the weakest, and the second revealing the absurdly small increases in salary that the principals were given. Approximately one-half of those who held their old positions had no increase at all, and 72 per cent of those who were rewarded were given an increment of $100 or less, 26 per cent very considerably less. The wonder is that trained men and women enter at all, to say nothing of remaining in, a vocation that offers such niggardly rewards for service.

Tenure of principal's position.

Number of years principal occupied his present position previous to September, 1916.	Number of high schools.				Total.
	Group I.	Group II.	Group III.	Group IV.	
0 years	8	14	9	21	52
1 year	8	6	10	9	33
2 years	12	4	12	10	38
3 or 4 years	11	11	16	7	45
5 to 10 years	23	11	10	7	51
Over 10 years	23	7	6	....	36
Total	85	53	63	54	255

The following table shows that of the 203 principals who occupied their present positions last year only 100 received an increase in salary.

Increase in principal's salary.

Increment in salaries.	Number of high schools.				Total.
	Group I.	Group II.	Group III.	Group IV.	
Change in principal	8	14	9	21	52
No increment	44	22	22	15	103
Increment of $50 or less	2	4	13	7	26
Increment of $51 to $100	14	8	16	8	46
Increment of more than $100	17	5	3	3	28
Total	85	53	63	54	255

A State policy of providing adequate increments in the salaries of high-school principals would do much to attract men of superior ability and to reduce the excessive changes in the principalship.

The median length of service in their positions by principals of first-class high schools in Missouri in 1916 was less than two years.

EFFECT OF THE WAR ON TENURE.

However bad conditions were in 1916, they became considerably worse with the entrance of the United States into the war. Large numbers of the young men teachers entered the Army, as there were no provisions by the Government for retaining them in the less dramatic but equally important national service of teaching. Some, especially teachers of science and of industrial subjects, have forsaken the schoolroom to aid in the campaign behind the lines; and recently there has been a steady and successful movement to enlist some of the most desirable young principals and teachers in various kinds of social work among the soldiers. The schools have willingly given up all these men and women as their part in winning the war, but it is a national shame that a false sense of economy on the part of the public should have permitted so many thousands of other principals and teachers to be tempted from the schools by the large increases in wages offered them by industries of all kinds. It is imperative that a program be formulated at an early date for recruiting for the secondary schools the highest quality of young men and women and for giving them adequate academic and professional training to equip them to educate the million and a half boys and girls who are seeking some form of advanced education.

THE TRAINING OF TEACHERS AND PRINCIPALS.

For the 1916 report of State High-School Inspector Kingsley, Prof. Inglis, of Harvard, prepared the following statement concerning the preparation of high-school teachers in Massachusetts. An ideal program for the training of such teachers has been formulated and recently published by the College Teachers of Education.

> The colleges of Massachusetts have always been the main source from which teachers are recruited for the secondary schools of the Commonwealth. Until the last decade of the nineteenth century the training thus afforded included solely instruction in the subject matter of the various studies to be taught. No attempt was made to provide specific training through professional subjects of education until 1891, when such training was begun at Harvard University. At the present time such courses are to some extent provided in all except 4 of the 18 colleges of the Commonwealth.
>
> The desirable forms of professional training for secondary school-teachers and the work now offered by the colleges of the Commonwealth are as follows:
>
> 1. Instruction in the subject matter of the studies to be taught in the secondary school. This is now well provided in nearly all the colleges.

2. Instruction in the fundamental professional subjects of education, such as the history of education, educational psychology, and principles of education. Thirteen or fourteen colleges in the State offer such courses, though in some cases these courses are taught by instructors not primarily interested in education as a professional subject of study.

3. Instruction in the principles and problems of secondary education. Nine or ten colleges offer such courses. Much remains to be done in this field.

4. Instruction in the methods of teaching in the secondary school. This may be provided separately or combined with instruction in the principles and problems of secondary education, or combined with instruction in the teaching of various subjects. This work is offered in a few institutions only, and is generally admitted to be inadequate.

5. Instruction in the teaching of various subjects. Five or six colleges provide some courses of this nature, but the condition is very unsatisfactory, in part because it is uneconomical to provide separate courses in the teaching of all the various subjects on account of the small number of students intending to teach a single subject, and in part because such courses are commonly taught by the regular college instructor in those subjects, whose experience in secondary-school teaching has been slight or entirely lacking.

6. Experience in supervised apprentice teaching. Nine or ten colleges now offer facilities for such apprentice teaching under professional supervision.

In 1916 about 700 graduates of Massachusetts colleges entered the teaching profession, for the most part in the secondary schools of this and other States. Of that number approximately 500 had taken at least two professional courses in education. Returns from colleges show that few, probably less than 100, had done some apprentice teaching as a part of their professional training in the college.

The colleges of Massachusetts have made a promising beginning of training teachers for the secondary schools of the State. Further progress in that direction is conditioned by a number of factors, among which the most important are—

1. The establishment of a system of certification which shall prescribe standards of admission to the service and encourage the professional training of secondary-school teachers.

2. Recognition of the fact that a graduate year of professional study is essential for the adequate training of such teachers, and provision for such a graduate course.

3. The provision of greater and better facilities for apprentice teaching under supervision as a part of the training of secondary-school teachers.

4. Provision of greater and better facilities for prospective teachers in the methods of teaching each of the various subjects in the secondary school.

It is to be noted that the first three of these factors are to a great extent dependent upon State action. Until the present, the initiative in providing facilities for the training of secondary-school teachers in Massachusetts has been taken by the colleges without the active assistance or cooperation of the State. It is probable that the extension of those facilities must depend to a considerable degree on the action of State and local school authorities.

New Hampshire suggests the following steps as feasible and likely to lead to a higher grade of scholarship in the teaching force of its high schools:

1. Let our State college be so organized as to give each student preparing to teach in high school four years of intensive work in the single subject which he plans to make his specialty. He would have minor subjects, also, of course. There is no good reason why the young person who has finished high school, and who knows that he is to teach at all, should not be able to choose his specialty before entering college as well as on the day he applies for a job.

2. Encourage postgraduate work by special State aid to graduate teachers who attain the master's degree, after much the same plan as that of our present State aid for qualified teachers in the elementary schools, which has worked so well.
3. Let the State college aim to furnish the bulk of the new teachers needed to recruit the secondary-teaching staff.

SUPERVISION OF INSTRUCTION.

Supervision is necessary for the improvement of teachers, whatever their training or experience. It is especially needed where it is least given, in the small high schools that are taught by young men and women, many of whom would rapidly become professional and increasingly expert under the guidance of a supervisor of insight and sympathy. As a rule, the county superintendent on his infrequent visits to a school gives little attention to the high-school teachers, partly because he feels that their training must have fitted them for their tasks and partly because the aims and standards of secondary-school teaching are still indefinite. The State high-school inspector probably has a larger influence at his annual visit, chiefly because he comes with the prestige of his position and a perspective gained from seeing the work of hundreds of teachers who are attempting to give instruction on the same or similar subject matter. It would be well if the functions of inspection and of supervision could be separated, as in Arkansas. Data from the several States, much of it unpublished, give evidence that the State inspectors vary much in their helpfulness to teachers. In Maryland, where, since the school survey supervision has been emphasized, State Inspector North reports that he has visited classes, recorded data on well-devised blanks (see Md. State Rept., 1917, pp. 168–169), held individual conferences with teachers on problems of instruction and with principals on problems of administration, suggested plans for working out desired school improvements, and in a large number of cases met the faculties after school hours, when questions of immediate moment to the particular school and of larger significance in the high-school field were discussed. The report continues:

> The plain intent of the present school law, as regards high-school supervision, is that the supervisor shall devote himself primarily to *supervision*—that is, to the task of endeavoring to bring about a better quality of instruction, to improve the actual teaching in the classroom; and though this involves a number and variety of other duties, both in the field and in the office, the outstanding function of a *supervisor*, as distinguished from an *inspector*, is unquestionably that of helping to improve teaching by working with the teachers now in service. The supervisor, therefore, began the year's work with the plan of working immediately at the actual problems of the classroom; but less than one month's experience convinced him that the year would have to be devoted principally to procuring changes in the internal organization of the schools, and in securing the minimum equipment with which a good quality of teaching might reasonably be expected. The most conspicuous needs of the school as a whole were found to lie in these three directions: (1) More apparatus, textbooks,

materials of instruction, library equipment; (2) rearrangement and better adjustment of school programs to the State course of study; and (3) more and better teachers. Accordingly, this report will review, in a general way, under these three heads the principal points of the supervisor's findings and efforts.

A part of the discussion of apparatus, textbooks, materials of instructions, and library equipment is appended:

> There were on the approved list for 1916–17, 72 high schools, 30 of the first group and 42 of the second. Of these, at least 7 of the first group (23 per cent), and at least 20 (47 per cent) of the second group were conspicuously short in these several particulars of the minimum laid down by the State board as requisite for placing a school on the approved list. Most of these schools had been on the list for several years, and many of them had drawn the State aid ever since 1910, when it was first granted; but they had never been furnished, nor would they, apparently, ever have been furnished with sufficient equipment to do genuine high-school work without the steady, insistent pressure and frequent regular inspection provided by the new law. Their shortages were of various kinds; some had no library and no apparatus of any sort; others had the unusable remains of an antiquated library and of an archaic laboratory outfit; and still others had, owing to annual changes of teachers, let their equipment, good at first, run down almost to nothing. These shortages mean that the classroom exercises in science were limited to mere textbook work, answering rote questions, the reciting of memorized portions of the texts; that there was no library reference or supplementary matter available; and that the instruction in the two social subjects, English and history, was simply dying on its feet, being confined entirely to one book—the text used; and the lack of maps and charts, either purchased or homemade, simply petrified the instruction in history and in Cæsar.

But supervision is needed also in large high schools, either directly by the principal or by experienced assistants to whom he delegates this important function. This is recognized and strongly urged by Dr. Tildsley, of New York City, in his report for 1918:

> What is most needed in our high schools, next to closer and more skillful supervision on the part of the principal himself, is more effective supervision by the first assistants who are chairmen of departments. There is a remarkable disparity in the effectiveness of such supervision at the present time on the part of the various first assistants in the different schools, and even between first assistants in the same school. It seems evident that, in the examinations in the past, scholarship has been given emphasis rather than qualities of leadership and administrative ability. It is to be hoped that in the coming examinations the board of examiners will emphasize personality, past achievement in our service, and proved qualities of leadership, rather than knowledge of the subject matter and even of methods. Scholarship and knowledge of methods, if not accompanied by courage, kindliness, and that intangible quality known as leadership, avail a head of a department but little. Contrary to general opinion, our high schools are suffering not from oversupervision, but from undersupervision. Some principals allow themselves to be confined to their inner offices, busied over details which could often be assigned to a subordinate, when they should be in the classroom inspiring the teachers and stimulating the pupils. Some of these principals, while thus giving too little of their time to actual classroom inspection, are not even supervising by proxy, since they have not succeeded in developing heads of departments who are the real leaders and not merely the nominal leaders of departments and who lead because of their grasp of the problems of their department, their initiative, encouragement, and judgment. Weak heads of departments for the most part must be charged against the principal of the school. If the board of exam-

iners has ever erred in placing unfit teachers on the first assistant's list, only in rare instances has pressure been exerted on the principal to take a first assistant not of his own choice. Furthermore, such first assistants have had a temporary tenure for three years, and during that period would have lost their licenses on unfavorable reports of the principals. Heads of departments grow if the principal encourages them or even allows them to grow. They degenerate if the principal gives them no authority and does not encourage the exercise of initiative on the part of his chairmen. A really strong principal will be found surrounded by strong, aggressive, and progressive chairmen of departments composed of enthusiastic, energetic, efficient teachers. Where such a condition does not exist, the responsibility lies with the principal who has stifled the growth of his teachers.

It is obvious that, if effective supervision is to be secured, a greater demand must be made as to training and professional fitness on the principal. State High-School Inspector Calloway, of Missouri, emphasizes this point in his report for 1916:

> We need to evolve in this State a position of high-school principal. The city superintendent can not give sufficient time to the supervision of instruction in our high schools. The superintendent with the grade work and with official duties can not effectively do this work. It is clear to me that it must be provided for through the high-school principal. He must be given more time. His work must be organized in such a way that he can find time for work with high-school teachers. The high-school principal should be given more authority and his duties more clearly defined. His status is not at the present time such that his influence with his teachers is strong. He is not taken seriously by high-school teachers, and consequently refuses to take a hand in matters over which he does not have full authority. Both authority and dignity must be attached to this position before our best men will remain high-school principals. When we have created such a position in this State, the high-school principalship will not be a stepping stone to the superintendency. The superintendent now has more than he can do. Such a change will not, in any way, curtail the importance of the position of the superintendent.

Inspector Kingsley, of Massachusetts, also recommends a requirement of professional training:

> Too often a principal is selected on the ground that he has a pleasing personality and has been unusually successful in teaching some one subject. These qualifications, while important, are far from adequate. He should be a student of educational problems. It is extremely desirable that he should have taken courses in high-school organization and administration in a college or university. This seems to be a reasonable requirement in view of the summer schools now offering such courses. Experience as principal of a smaller school affords excellent training for similar responsibilities in a larger school, while experience as a department head under a capable principal is of added value.

Not only must the principal be trained, but he must also be given time from his administrative duties to visit classes and confer with his teachers daily in an effort to improve their work. Every one who has studied the situation has found that actually few principals find the time to perform adequately the most important function of their office—the supervision and improvement of instruction. Mr. Calloway, by means of a questionnaire sent to principals of all first-

class high schools of Missouri, St. Louis and Kansas City excep
found that they distributed their time as follows:

Teaching periods of principals.

Number of periods.	Number of principals.	Per cent of principals.
0	6	5
1	2	1
2	3	2
3	12	10
4	23	11
5	37	30
6	34	28
7	4	3

Median number of periods taught daily by principals, 5.

Keeping study hall.

Number of periods.	Number of principals.	Per cent of principals.
0	44	37
1	37	31
2	29	24
3	9	8
4	1	1

Median number of periods given daily by principals to keeping study hall, 1.

Doing office work.

Number of periods.	Number of principals.	Per cent of principals.
0	20	16
1	61	50
2	25	20
3	13	8
4	11	6

Median number of periods given daily to office work by principals, 1.

Supervising.

Number of periods.	Number of principals.	Per cent of principals.
0	82	70
Less than 1	8	6
1	16	13
2	10	8
3	0	0
4	1	1

Median number of periods given daily to supervision by principals, 0.

A similar story is told in the reports from Virginia and Kentucl
and doubtless would be repeated in almost every State if the d
were available. With the omission of 31 principals in Virginia a

of 110 in Kentucky who made no report, and of 20 in Kentucky who confessed that they gave "very little" time to supervision, the following tabulation was made:

Amount of time given daily by high-school principals in Virginia and Kentucky to supervision.

Periods.	Virginia.	Kentucky.
	Per cent.	*Per cent.*
Give no periods	61	22
Give less than 1 period	....	9
Give 1 period	15	24
Give 2 periods	14	20
Give more than 1 period	20	35
Give more than 2 periods	7	14
Give more than 3 periods	2	8
Medians	0	1

The situation is bad enough if the figures are taken as recorded; it is worse if they are critically examined. Although there is no disposition to imply dishonesty on the part of principals making returns to the State office as to how they spend their time, it must be recognized that the tendency would be to report a larger number of periods given to professional and supervisory functions than actual daily practice would warrant; moreover, some principals may have misunderstood the instructions. In Kentucky, for example, 12 principals report that they spent from five to nine periods daily in supervision. One-half of these principals were in schools of fewer than 125 pupils, 43 per cent of them in schools of fewer than 50 pupils, and 25 per cent in schools of fewer than 25 pupils. Surely it would be worth while for the State inspector to make a study of the methods and results of such intensive supervision.

Inspector Calloway, of Missouri, makes the following comment on the returns from his questionnaire study, some of the data of which were presented above:

> To make a frank statement, there is not in this State, with a very few exceptions, what may rightfully be called a high-school principal. Except as regards some minor duties, practically all of the so-called high-school principals are nothing more than high-school teachers. They are principals in name only. This is borne out not only by the amount of teaching done but also by the tenure of service. Forty-four per cent of the teachers are in their positions this year for the first time, while 43 per cent of the principals are in their positions for the first time. Of the 121 principals reporting, there are only 11 who do not teach as many as three periods, or half time; 6 report no teaching; 2 teach one period; and 3 teach two periods per day; 72 per cent teach four or more periods; 3 per cent teach five periods; and 28 per cent, or more than one-fourth, do a full day's teaching.
>
> As study-hall keepers, 77, or 63 per cent of the 121, keep study hall one or more periods; 85 per cent of the principals give one or more hours per day to office work; 35 per cent give two hours or more; and 15 per cent give three or more hours per day to office duties.

When the question of the supervision of instruction in the high schools is taken up the high-school principal falls far short; 82 of the 121, or 70 per cent, give absolutely no time to high-school teaching besides their own classes. An additional 6 per cent give less than one hour to high-school supervision, and only 22 per cent give as much as one hour to high-school supervision. My observation is that this is perhaps an overstatement of what is really done.

Of the 121 high-school principals, 52, or 43 per cent, are in their positions this year for the first time; 21 per cent are in their positions for the second year; and 16 per cent are in their positions for the third year; 5 per cent have been in four years and 4 per cent for five years. Five high-school principals have been in their present positions more than 10 years.

The State over the high-school principal has no voice in the selection of his teachers; 97 of the 121 report no voice in the selection of high-school teachers, and those who report some voice in the selection show that this is usually only in an advisory way.

The great number of new teachers in our high schools each year as a single factor shows a great need for a supervising principal. The fact that 44 per cent of the teaching force in our high schools change each year is in itself an unquestioned demand for closer supervision. And the additional fact that 32 per cent of the total teaching force has never taught in the high schools before this year is but a further justification of this demand. It is impossible that teachers do satisfactory work under such conditions. Perhaps no other factor is so largely responsible for the shifting each year of high-school teachers as the lack of adequate supervision of instruction. Many teachers come into the high schools enthusiastic and with high ideals of what ought to be done. They are misunderstood by their pupils. Their work does not go as they have planned. They become discouraged, flounder around for a time, and then settle down to the line of least resistance.

EXTENSION OF FUNCTION OF HIGH SCHOOLS.

The growing critical attitude toward the high school, of which mention has already been made in this and in the report two years ago, finds expression occasionally in such a passage as the following from the superintendent at Williamsport, Pa.:

> In many ways the high school is doing excellent work, for which both principal and teachers deserve full credit. There are, however, in my judgment, some weak points that ought to be strengthened. One weakness is in the organization of the high school. The general attitude of faculty and students seems to be that children are sent to the school to do a certain amount of work, and that the teachers are there for the purpose of testing the children to find out whether or not they have done their work and to grade them accordingly. Both parties seem to feel that when each has performed his work individual responsibility ends. It does not seem to be the prime motive of the high-school faculty as a whole to bring out the best that is in the pupil, but rather to permit the delinquent to eliminate himself from his class or school through repeated failures. The character of this kind of discipline is negative and repressive instead of positive and directive. Even in some colleges to-day there is a dean whose duty it is to get hold of the failing student early and help him, if possible. Throughout the high-school course there should be continuous growth in self-reliance, willing and cheerful obedience, and closer cooperation between the student body and faculty, and also like relations should exist between the principal and faculty.

Criticism must lead primarily to a clarification of the function of secondary education. Toward this end the appended statement of Commissioner Meredith, of New Jersey, will be an aid:

> The high school should assist—
>
> First, by leading the pupil to a conception of the variety and the significance of the work to be done in the world. This may be done, in part at least, through a study of vocations. Pupils may thus be led to see what fields of activity are open both to boys and to girls; what general and what specific personal qualities are necessary for progressive success, together with the special training required. A study of this character would reveal the probable demand for workers in a given field, and also indicate the remuneration to be had in terms of both money and personal and social advantages.
>
> Second, by testing the pupil's capacities and interests over a wide field of subject matter and activities. The high-school period is a time of self-discovery and self-realization for the pupil, and the process of discovering latent interests and abilities is a function both of the teacher and of the pupil.
>
> Third, the school may assist the pupil by giving him definite training in fundamental subjects and by providing for systematic physical education, which should include the inculcation of ideals and standards in this paramount phase of education.

Whatever may be the ideal, there can be little question after reading numerous reports from both city and State superintendents that the tendency of high-school education is strongly vocational. This tendency is likely to be strengthened by the Smith-Hughes law, which by its opportunities for financial aid seems to be influencing strongly the reformulation of curricula. Many schools, however, are finding difficulty in meeting the requirements of the law.

Self-criticism is also leading to a widening of the functions of the high school. The tendency to include in secondary education the seventh and eighth grades as a part of the junior high school is progressing quietly, especially in the largest cities; New York, Chicago, Philadelphia, St. Louis, and Boston having established the beginnings of such schools. The inclusion of two years upward as a junior college is generally approved, but for economic reasons the movement is making little progress. Springfield, Mass., and Kansas City, Mo., have recently established junior colleges. Extension work by high schools has been tried in one county in California, and the departments of teacher-training for the elementary grades is making substantial progress. Reports from the several States testify that the work is proving satisfactory. Evening high schools are of increasing importance, with enrollments encouragingly large; but everywhere the problem is to secure a high percentage of regular attendance. The reports testify that the effort is generally being made to present in these evening schools, as has been done in the schools conducted by the Young Men's Christian Association and other semipublic or private agencies, what the mature students want. Summer high schools likewise seem to be accepted as of growing importance as a regular part of the school system. It is interesting to note that a number of reports justify them by presenting data concerning not only the attendance but also the success of the pupils in earning credits and in maintaining their standing in the successive terms.

One development of high-school work that needs more extensive treatment than is possible in this report is in the growth and use of high-school libraries. From every section of the country have come reports not merely of increased appropriations for books but also of the employment of trained full-time librarians and of the introduction of systematic instruction in library work. Although it is strange that this development should have come so late in our secondary schools, it is no less gratifying that the movement is progressing so generally and with such vigor.

THE WAR AND SECONDARY SCHOOLS.

The effect of the war on secondary schools has been manifest in the enrollment, in the subject-matter of instruction, and in the extra-curricular activities. Mention has already been made of the fact that many teachers and principals have been drawn from the schools by the demands of other service. The pupils also have felt those demands; some of the older ones entering the Army, and many others, especially in centers of industry, undertaking remunerative work. The superintendent of schools in Chelsea, Mass., for instance reports:

> During the preceding year there was a large loss of pupils, largely due to the increasing demand for unskilled and inexperienced laborers. This condition was aggravated by the increasing cost of living and the fact that many of our pupils came from poor families in which the older children were called upon to help meet this higher cost of living by going out to work for wages. Undoubtedly the higher wages which were offered for this kind of labor tempted many pupils who had been gradually losing their interest in school to leave in order to go to work. Figures show that in the year 1915–16 nearly two-thirds of those who left school were freshmen.

In New Bedford, Mass., 23 per cent of the entire high-school enrollment withdrew during the year 1916–17, 62 per cent of the withdrawals going directly to work. In Providence, R. I., La Crosse, Wis., and Aurora, Ill., there were losses of from 4 to 7 per cent; and in the State of New Jersey the increase in high-school enrollment for 1916–17 was only 696 pupils, or 1.4 per cent. The large cities, like New York and Boston, have had smaller enrollments than the previous steady growth had led them to expect. But there has been no such emptying of the schools as many had expected; in fact, school reports for 1915–1917 far more frequently mention continued growth in high schools than any decrease in the number of pupils.

Another effect of the war, that in the spirit of the student-body, has been presented by the superintendent of La Crosse, Wis.:

> While, in any circumstance, war is a most deplorable thing, in my judgment it has been a most wonderful factor in the development in the secondary school of the spirit of citizenship, honor, integrity, and loyalty. The various war activities which the schools have been doing during the year have been wonderful factors of education.

There is no other one influence which has so emphasized the responsibility of even the high-school boy or girl as a citizen, and demonstrated beyond the question of a doubt the fact that no individual can live in a community and be a part of the community without being responsible to the community, and that no person, even a high school boy or girl, can live in modern society as an individual entirely independent of the other individuals in the community.

From all quarters come similar reports; never before in the marvelous growth of secondary education have the pupils been so enthusiastic, so earnest, and so persistent in their work. This has in large measure been due to the fact that high-school teachers have incorporated fresh material and developed or emphasized it by the war situation in their instruction of history, civics, English, science, mathematics, and practically every other subject in the curriculum. It is difficult to see how those teachers after the success that they report in using meaningful, motivated material can return to the formal work that has characterized so much of high-school instruction. In this connection should be mentioned the careful elimination in various cities, notably in Cincinnati under Supt. Condon, of all material in high-school textbooks that seemed directly or indirectly to support autocratic government. Never before has there been such a widespread and determined effort to make secondary schools the means of inculcating the ideals of democracy.

From schoolmen and from the pupils themselves all over the country there has been a constant effort to learn how the schools can best help in the war. Partly to answer this implied question, the Government has, through the Commissioner of Education, issued a number of bulletins to the schools and to the public at large. Among these may be mentioned "Europe's Educational Message to America," "Secondary Schools and the War," "Suggestions for the Conduct of Educational Institutions during the War," "Work of American Colleges and Universities during the War," and "Government Policies Involving the Schools in War Time," the last one mentioned being signed by five members of the Cabinet whose departments are most concerned. The burden of all those messages has been that the high schools should continue their work and make it more vital for the welfare of the Nation in the years to come. The Commissioner of Education also published recommendations of a joint committee on the teaching of the sciences and of industrial work during the war, and, in cooperation with the Food Administration, issued a series of "Lessons in Community and National Life" for the purpose of inculcating the ideals of democracy and broader conceptions of national life.

All over the country the high schools that were equipped for the work gave instruction to the men in the selective draft under the direction of the National Board of Vocational Education. Classes were conducted in telegraphy, in motor mechanics, in the trades connected with the construction of airplanes, and in other similar work which the men had been assigned, high-school pupils often assisting their teachers in the instruction. In the summer schools training was in many places given for the Women's Business Reserve Corps, the students being women who were preparing to take the places of men called to the Army. In Philadelphia these courses, under the direction of Dr. Lucy L. W. Wilson, included the elements of business, bookkeeping, stenography and typewriting, or stenotypy, filing, office practice, civics, current history, war-time housekeeping, drawing and draughting, telegraphy, and English expression, oral and written. The extra curricular work of high-school pupils during the year has included various kinds of assistance to officials boards, such as the filling and filing of cards, the tabulation of questionnaire returns, the writing of letters and the addressing of envelopes, the making of posters, and other public signs; securing membership for the Red Cross, the Junior Red Cross, the Young Men's Christian Association, the Knights of Columbus; the making of articles for these organizations; the collection of books for soldiers' libraries; the selling of thrift stamps and bonds; the adoption of orphans in the several devastated countries; aiding in the campaign for conservation of coal and food; gardening and farming. The story of the self-denials, the enthusiastic work, and the effective accomplishment of our boys and girls would make one of the most heroic chapters in the history of secondary education.

FARM SERVICE BY HIGH-SCHOOL PUPILS.

Late in the spring of 1917 there were urgent calls for assistance on the farms by high-school boys, and in response arrangements were all over the country hurriedly made by which boys were excused from some school attendance in order that they might render service. In some cases they went on the farms as regular helpers; in others they did seasonal work as the crops of the neighborhood demanded. A number of schools organized their boys into groups who rented and cultivated a farm of their own. Usually school credit was given boys who worked for three months or so, providing their marks were passing; but of course there were different provisions among the many schools whose pupils went to this temporary work. In Philadelphia the board of education granted furloughs to boys over 16 whose class standing was satisfactory, the furloughs applying to May and June and September and October. In North Dakota the State board of education resolved on May 16, 1917, "that it is the patriotic duty of every school in our State to open not earlier than October 1, in order that as many boys as possible of suitable age can assist in harvesting the crops." This resolution was approved by the

State High School Conference. The board very wisely added to its resolution this memorandum:

> This board believes that it is also the imperative duty of superintendents, principals, teachers, and boards of education to urge the attendance at school of all boys below conscriptive age, because the burden of responsibility which will rest upon the rising generation will inevitably be greatly increased by the facts of the war.

Although the appeal for boys was made late, there are reports from all parts of the country that the response was generous, and to the surprise of skeptics the city-bred boy on the whole furnished acceptable aid on the farm. Some of the camps made less money than they had expected, or even after a summer of hard work went into debt; but the balance was on the right side of the ledger; additional food was produced, a demand by boys nearing military age for opportunity to serve was satisfied, and there were numerous by-products of no inconsiderable value. Among these may be mentioned an increased appreciation by the public of the high-school boy, some understanding by the city boy of the farmer and his work, and the introduction of agriculture into several city high schools. Such courses are given in Paterson, N. J., Decatur, Ill., Kansas City, Mo., and Pittsburgh, Pa.

The experience of 1917 revealed possibilities for so great national service that in the several States committees were early appointed to formulate more complete and effective plans than the earlier emergency had made possible. Of all the reports none has proved more intelligent and helpful than that of the committee on mobilization of high-school boys for farm service, Frank V. Thompson, chairman. From this report extensive quotation is made.

On the basis of its experience in 1917 with 1,600 boys—500 in 16 camps and 1,100 on individual farms—the Massachusetts committee made valuable recommendations for the continuance of the work. The following, both direct and implied, are of general interest:

> The committee is convinced that, given the three essentials of time—that is, early enrollment of boys and arrangements for employment with farmers, of proper supervision, and of cooperation with the local agricultural organizations—the work can be successfully carried on.
>
> The committee undertook the development of a plan of placement on farms, as follows:
>
> (*a*) One or more boys on individual farms as requested by farmers, the boys to live in the farmers' homes.
>
> (*b*) Boys to work through local placement as needed on the farms in their vicinity, returning to their homes at night.
>
> (*c*) Organization of camps from which boys would go to work by the day or week on farms in the vicinity of the camp.
>
> The season's experience has demonstrated to the committee that the provision made in the high schools of the State for placing boys on farms for day labor, or for longer periods, can and should be carried on under a plan similar to that worked out for this season; that is, through local placement and under local supervisors.

The committee believes that a successful working out of the camp method of supplying labor requires substantial modifications of the 1917 plan. Among the modifications to which it wishes to direct attention are the following:

1. The necessity for immediately beginning a campaign to acquaint the farmers of Massachusetts with the results of camps established this year and the possibilities for next year.

2. The committee should assume the responsibility for and control of the supervision of camps.

3. The director should have control of the location, equipment, and commissary of each local camp, but should in every possible way seek to utilize existing community resources to the end of making the expenses as low as possible.

4. All of these matters mean expenditure of public money rather than private support by subscription. (An estimate for 50 camps in 1918 is made of $50,000. In 1917 there was an expenditure of $10,141.31, or $6.33 for each boy.)

5. The administration of plans the committee proposes involves the following changes:

(*a*) The appointment of a rather large and representative advisory committee.

(*b*) A small executive committee, seven members, largely made up of men who have had experience in the work during the season of 1917, who shall be responsible to the public safety committee for the conduct of the work.

(*c*) The appointment of a director of mobilization of school boys, responsible to the executive committee for carrying out policies, when adopted and ratified by the executive committee of the public safety committee.

(*d*) The director to be employed at once to carry on the campaign of publicity, of securing cooperation, of making plans for enlistment, of placement; in short, all the work necessary to get an early start on the farm work for the season of 1918.

So far as the experiment in Massachusetts goes to-day the committee finds:

1. That the right type of boys under efficient supervision are valuable in food production.

2. That mutually advantageous working arrangements between boys and farmers can be brought about.

3. That the employment of the boys during the summer, being a seasonable occupation, can be done on a considerably larger scale with no disadvantage to the labor market.

4. That as rapidly as the men withdraw from productive industry for war service, as increased demands are made upon transportation facilities for forwarding troops, munitions, and supplies more and more will production of food be necessary as near as possible to the point where the food is to be consumed.

5. That so far as can be foreseen, farm labor shortage will be more acute in 1918 than it was in 1917.

The committee recommends that the camps be conducted on a semimilitary basis, that training courses be provided for camp cooks and supervisors, and that a uniform practice in conducting camps be worked out embodying the features proved by experience to be best.

The *Maine plan* would probably need modification in some details to be workable in any other State, but it is of great interest in the present emergency. The following is quoted from a circular issued by the officials of the junior volunteers of Maine:

GENERAL INFORMATION.

Purpose.—The purpose of this movement is to discover, enlist, and train boys and young men to supply the extra demand for farm labor made necessary through the increased acreage propaganda recommended by the State and Federal Governments to provide for the war emergencies.

Enlistment.—Boys between the ages of 16 and 20, of good moral character, who can pass the physical examination and furnish satisfactory recommendations, may qualify as volunteers.

Dates of enlistment are on and after June 1, to and including October 31, unless otherwise released by the governor, on recommendation of the director general.

Application blanks may be secured of the principal of the local high school or academies. If not, write to headquarters. Enlistment for both boys and leaders will be on the same basis as that of the National Guard. The boys will be known as "Volunteers," and the leaders as "Commanders."

All desirable candidates whose applications have been duly filed at headquarters will receive orders to report at the mobilization camp for final examination and enlistment.

Leadership.—The boys will be sent out in squads to work in different sections, as opportunity may afford, under the direction of competent adult leaders, appointed by the director general, who will have full charge of the boys until they are returned to the mobilization camp, unless otherwise relieved by the director general. These leaders will be men of unquestioned Christian character and ability for leadership with boys, coupled with a practical knowledge of farm work.

Mobilization.—The camp will be mobilized June 1, at the Y. M. C. A. State Camp Farm, Winthrop Center. This can be reached from either Winthrop or Augusta by trolley.

Instruction and training in general farm work will be given at the camp by representatives of the University of Maine and other qualified leaders, before assignment to service is made.

The volunteers will be sent out in companies, under their commanding officer wherever and whenever needed.

Furloughs.—Brief furloughs will be granted to the volunteers in cases of emergency, by the governor, on recommendation of the director general.

Compensation.—Opportunity for service.

Wages, $1 per each secular day from date of enlistment.

Subsistence (board and lodging).

Uniforms (hat, blouse, breeches, leggins, shoes, overalls, and frock).

Medical attendance.

Transportation.

School credits.—Full school credits will be allowed volunteers on both the fall and spring terms when engaged in service. The leaders will also tutor the boys and as far as possible keep them up with their regular school work.

Parents' approval.—It will be necessary for each boy to secure the consent and approval of either his parents or guardian.

General administration.—All matters pertaining to misunderstandings, adjustments of labor difficulties, change of location or assignment, discipline, enlistment, furloughs, rank, discharge, or other general questions shall be referred to the director general.

NATIONAL CHILD LABOR COMMITTEE PROPOSALS.

To send any children to farms without knowing the actual need for them or without regulation would be wasteful and a hindrance to the farmers, who do not want a horde of inexperienced laborers on their hands. Therefore:

1. Create and appoint a State committee of school officials to confer with the State agricultural department and organizations of farmers to find out whether there is a real need of school children on farms.

2. If the need exists, draft a set of regulations to meet the need and at the same time protect the children, such as these:

(*a*) Children 14 and over only, to be permitted to work on farms for others than their parents, and excused from school for this purpose from June 1 to October 1.

(b) Children 14 and over only, to be permitted to work more than eight hours a day, or more than six days a week.

(c) Children thus excused must have special work permits, issued by the committee of school officials or persons authorized by them showing that the child has been examined by a physician and is physically fit for work, permits to be issued only for farms known by the committee to be suitable places for the children to work.

3. The State committee of school officials should be responsible for the supervision of children at work on farms to see that regulations are enforced. Transportation, feeding, and housing should all be supervised.

As to housing, it is advisable that children sent to farms to work should not be housed with the farmers.

It has been suggested that the Boy Scouts, for instance, can establish camps in a given farm district under Scout Masters. Local authorities will be glad to provide transportation from camps to farms, and the boys can work in gangs, in one field one day, in another the next, and return to camp after work. In this way both work and living conditions will be supervised, and farmers will not have the responsibility and cost of housing them.

Similar camps may be established under playground directors, probation or school officers.

But be sure you know where the children live and how.

England is already wishing she had not used her children so recklessly at the beginning of the war. Let America learn by England's experience.

The Massachusetts plan differed in details but not in spirit.

MILITARY TRAINING IN HIGH SCHOOLS.

In the enthusiasm subsequent to the entrance of this country into the war there were many who believed that military drill should be made compulsory for all boys in high schools. Indeed, before April, 1917, several private secondary schools had offered military training to their older students who hoped soon to enter officers' reserve camps. A few public high schools, notably those of Boston, had for some years given a form of military drill to its boys; and after the declaration of war many schools, especially those in cities, introduced military training, usually optional. Among the cities may be mentioned Dallas, El Paso, and Waco, Tex.; Aurora, Elgin, Moline, and Chicago, Ill.; Stamford, Conn., Louisville, Ky., Bangor, Me., Baltimore, Md., Springfield, Ohio, Johnstown, Pa., Pueblo, Colo., Kansas City, Mo., Richmond, Va., Providence, R. I., and most of the schools of Arizona. In Wyoming an elaborate system was developed and approved by the legislature by the grant of financial aid; the legislature of Oregon provided for an elective course in military tactics and training in high schools, to be directed and supervised by the governor; and the legislature of New York, without the approval of the State department of education, passed a law requiring military training of all the older youth. In Massachusetts and New Jersey more deliberate action was taken. Commissions composed of representatives of the schools, of business, of industry, and of the Army, were appointed to consider the problem. In both cases they disapproved military training in high schools.

The arguments for and against military training in high schools are summarized in the two following letters, which are quoted from the report of the State superintendent of public instruction of Minnesota for 1917:

FAVORABLE TO MILITARY TRAINING.

Some one has well said that one of the great defects of American life to-day is slouchiness—slouchiness of physique, slouchiness in the appearance of our towns and villages, slouchiness in the application of mind and body to the tasks of the day, slouchiness in discipline and responsiveness to orders in cooperative efforts of all kinds. Compulsory military training enforces on a boy promptness in obeying orders, and he must apply himself to a given task until it is satisfactorily finished. His mental and physical being must always be at the best. All of these phases are being introduced and emphasized when military training is taught. It must be introduced in a spirit of civic service, and the cadets must be taught that this is a part of their training for citizenship.

Our experience with military training for several years in the Rochester High School leads me to say that it is one of the very best courses that we have offered. The discipline of the school is very much better, the boys seeing the value of self-control and decent restraints. The cadets are interested in civic problems and their responsibilities. Citizens of Rochester will testify to the value of this training for their boys. I have yet to hear a complaint on the cadet organization in the Rochester High School from the parents of the boys taking this work.

The cost of this work is very slight, as we have asked the boys to buy their own suits and caps. This year the cost has advanced from $15 to about $23. The boys feel it keenly, and we have allowed them to take the drill and rifle practice without the regular cadet uniform. Lieut. W. F. Wright, of the local Machine Gun Co., is the drill master and receives a slight remuneration.

Drill is offered twice a week and rifle practice by squads once a week. During the winter season indoor drill and rifle practice are given, and during the spring, summer, and fall, outdoor practice. Interest in the organization is so keen that prominent citizens, who are members of the local rifle club, offered to take squads of cadets out to the rifle range. The rifle range is owned by the Machine Gun Co., the Rifle Club, and the cadet organization.

State-wide military training in high schools has been a decided success in the State of Wyoming, where legislative aid is granted. At first there was a great deal of opposition, but it now has the hearty approval of all the citizens of the State. The State superintendent of instruction has this to say: "I take this opportunity to express my hearty endorsement of the cadet work which is being done in Wyoming. For some time I have been watching the influence which it has exerted upon the young men enrolled in the various schools, and I wish to say that I consider it most valuable training for our high-school boys. I am glad to see the movement growing in popularity."

Finally, I wish to say that here is an organization in which the physical welfare of practically every high-school boy can be cared for. Football takes care of about 15 or 20, basketball about 10 or 15, baseball about 12 or 13; but in drill, setting up exercises, and rifle practice, every high-school boy may compete. Where the cadet movement has been tried, it is a success. Austin, Mankato, St. James, and Stillwater, in this State, are very successful in their experiments. Those who have tried the experiment can speak from experience, others can only guess, and those who oppose the movement are mostly guessers and mothers who did not raise their sons to be soldiers but want them to be mollycoddles.[1]

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[1] Supt. H. A. Johnson, Rochester Minn.

THE OPPOSING VIEW.

The world is suffering from a hysteria of fear. Fear has entered the courts of Europe and shaped the policies of kings. The nations at war to-day had but to look across their boundaries any night for the last 30 years to behold a horrid, grinning monster, ready to leap at their throats. They talked about "perils," until at last an emperor had himself pictured riding in the night of a black world-catastrophe, with uplifted sword, defying the "Yellow Peril." In these later days this fear has reached America. Congress appropriates hundreds of millions to banish fear, but it is not enough. Our schools must be enlisted in the desperate fight to lay this ghost of fear. And now this State will be asked, as others have been already, to introduce military drill into the curriculum of its public schools.

The purpose of this training is that our youth may be enabled to repel the attack of a foreign foe. And it is accepted by all, militarists included, that the prime qualification for a soldier, the necessity before everything else for the man who fights, is a sound, strong body. The advocates of military drill affirm that their system furnishes the best training for developing strength and endurance. If this were true, military drill might be justified; for a strong body is as essential to the arts of peace as to the arts of war. And may I interject that the demands of peace during the next 10 years will be a severer test upon American manhood than any war to come? But the claim is not true. And I call to witness those who know.

First, Dr. Sargent, veteran director of physical training at Harvard: "Military drill is not an adequate means for physical training. It is not only very limited in its activities, but actually harmful in its effects upon boys less than 18 or 20 years of age. It is apt to foster a bombastic spirit of 'tin-soldierism' and a false sense of patriotism which does not appreciate the seriousness of war nor the glories of the struggles of peace."

Dr. Herman Koehler, of West Point, in his "Physical Training in the Service," says: "The attributes, in order of importance, may be summed up as follows: (*a*) General health and bodily vigor; (*b*) muscular strength and endurance; (*c*) self-reliance; and (*d*) smartness, activity, and precision. It is upon the first of these—health and bodily vigor—that the development of all the other qualities so essential in a soldier are dependent, and for that reason the maintenance of robust health and the development of organic vigor should be considered the primary object of this training."

Sir William Aitkin, professor of pathology in the Army Medical School of England, says: "Boys given military training at 18 make soldiers who are less robust and efficient than men with whom this training was deferred a few years, remaining in civil life until after their bones, heart, and lungs were more matured and developed."

PHILADELPHIA, *May 8, 1916.*

To the Joint Committee on Higher Schools.

GENTLEMEN: The subcommittee on military training begs to report as follows:

The extension and development of the present method of physical training is strongly advised, supplemented by practical instruction in hygiene, prevention of disease, and immediate treatment of wounds and injuries.

I quote from the report of special commission on military education and reserve appointed by the Governor of Massachusetts, in June, 1915, consisting of a lawyer, a publisher, two college presidents, one manufacturer, one representative of union labor, and three retired generals, two paragraphs:

"The overwhelming weight of opinion from school teachers, military experts, officers of the Regular Army and the militia, and the general public is against military drill as defined in the first clause above. It is generally agreed that the military drill which a boy receives in school is of little or no advantage to him from the point of view of practical soldiering. As far as available evidence goes, drill in the schools has had no beneficial effect in promoting enlistments in the militia, except in a few

> isolated localities. For various reasons it has seemed to create a dislike for soldiering. Military drill in the schools is objected to by many on the ground that boys of school age have not attained sufficient mental maturity to appreciate what war and fighting mean, and are therefore unable to digest the ideas which military drill presents to them in concrete form. It is worth noting that military drill as such is given in the schools of no countries of the world except Australia and Japan.
>
> "The commission does not recommend military drill, but is opposed to it."
>
> The judgment of the men who know of committees and commissions and of nations is against military drill in public schools. France and Germany have both tried it, and have abandoned it for a more rational system of physical training. Any person who will inspect the physical training given by skilled experts in our public schools will find now all that is desirable in military drill, much more that is desirable added, and whatever is undesirable eliminated. He will see youths, both boys and girls, in large groups, executing complicated movements with precision worthy of trained soldiers. He will hear the sharp command; he will see instant obedience to authority. He will be proud of these boys and girls, physically fit, ready to glorify their country in peace, and, if it must be, in honorable war.[1]

The nature of the military training offered in our high schools has varied widely—from mere marching in formation to the study of tactics. Richmond, Va., has published its course of study in military training, which consists of five hours a week for each class. First year—drill, three hours; signaling and marksmanship, two hours. Second year—drill, three hours; company administration and organization and military hygiene, two hours. Third year—drill, three hours; map reading and field engineering, two hours. Fourth year—drill, three hours; tactics and leadership, two hours. This is a part of the Wyoming plan of military training, concerning which much has been published. The purposes of the military training, like its nature, have varied widely—from improvement in physical well-being to military preparedness and moral development. The last-mentioned purpose assumes a general transfer of training that has nowhere, especially in countries where such training of adults has been most firmly established, been proved or even largely claimed. The examination of the young men who entered the National Army has emphasized, as the schoolman has never been able to do, the need of serious and continued physical training of our boys and girls; and usually military drill in high schools has been justified as contributing to this end. The recent manuals on physical education issued by the States of New Jersey and New York are admirable outlines of work that should be enforced in all high schools.

THE FUTURE OF THE HIGH SCHOOL.

It is generally recognized that the high school is in the critical stage of its development; no other phase of public education is so often discussed and so little understood. Having attained during

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[1] Asst. Supt. W. F Webster, Minneapolis. Minn.

the past generation a marvelous physical growth and a grat
improvement in its internal administration, it remains now
defined and directed purposefully and effectively toward end
sonant not only with elementary and higher education but als
the larger aims of national life. Before this can be satisfac
done, the newer spirit of democracy and national ideals mu
clearly formulated and accepted throughout the Nation as a
for all national life. Then, to make opportunities equal for
youth of our country, there must be extensive aid by the F
Government to public high schools, which will thus be reco
as an effective instrument in training leaders in the upbuild
national welfare. On the basis of definitely declared and ac
ideals of democracy, and with the aid of a Federal subsidy,
sionally trained principals and teachers of the finest qualities
be secured to reform and redirect not merely the curricul
courses of study but also the social activities of the high sc
Then, and not till then, may we expect them to reach their h
efficiency as agencies in the development of the Nation.

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PUBLIC EDUCATION IN THE CITIES *of the* UNITED STATES

By

J. H. VAN SICKLE, JOHN WHYTE, AND
W. S. DEFFENBAUGH

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PUBLIC EDUCATION IN THE CITIES OF THE UNITED STATES.

CONTENTS.—I. The larger cities: Introductory—Americanization—Elimination of German and the teaching of foreign languages—Junior high schools—Vocational education—The Gary School—Military training in the schools—War activities in the schools—Conclusion. II. The smaller cities: Administration—School board rules and regulations—The superintendent—The survey in school administration—Salaries and promotions of teachers—Duplicate schools—Supervised study—The war and the small city schools.

I. THE LARGER CITIES.

By J. H. VAN SICKLE, *Superintendent of Schools, Springfield, Mass.*, and JOHN WHYTE, *New York University.*

Long before America's entry into the great war, education in the larger cities, in common with every other aspect of our national life, was reacting to the great conflict across the seas. Our educational authorities were watching carefully the effects of the war upon European education, with a view to appropriating for our purposes the educationally fruitful ideas that were coming from the cataclysmic struggle, in which we had as yet no part; but as the months passed and the inevitability of our being drawn into the struggle became apparent, theoretical discussion as to the wisdom of this or that educational innovation of England or France gave way to the immediate consideration of the relation of the schools to the problem of war itself, in the event of our entering it. The schools were analyzed as to their part in a great preparedness program, and every phase of educational activity was scrutinized as to its potential contribution for service to a country at war. With the entry of America into the war, the slogan for the schools became "Win the War," and the solution of all the school problems was approached from that angle, for it was soon realized that the schools had become an essential part of the very machinery of modern war. That slogan is still, after 18 months of America's participation in the war, the determining factor in any consideration of educational problems, but already the problem of reconstruction is forcing its attention on the schools with an emphasis that is sure to become more and more insistent. And rightly so, for it is very apparent that a great many of the educational problems of a country at war are and will be the problems of a country at peace, with the exception that in war their seriousness is accentuated and their immediate solution demanded. Hence it is frequently possible—and where it is possible, it is surely the part of wisdom to act accordingly—to unite the discussion of the best educational measures for a "Win the War" policy to a discussion of the applicability of those measures to post-war programs. By so doing we shall be proceeding along the lines of the warring European nations (particularly England and France), who under the compulsion of the times have adjusted their education to war and at the same time have not neglected planning and even executing in part such a revision of their whole educational policy as will best make up for the derelictions of the past and insure the future. Unless we proceed similarly, it is likely that after the war, when our problems seem less acute, lacking the stimulus of a great catastrophe, we shall try to solve them in the same haphazard, indifferent way that has characterized our attempts at this solution in the past.

The latest example of the long look ahead toward the closer relations, commercial and otherwise, which are sure to obtain between the allied nations is furnished by France, which through the French high commission has arranged to send to the High School of Commerce, of Springfield, Mass., for an intensive course of two years in American business practice, 35 young women, about 18 years of age, who have had a preliminary education equivalent to that of a graduate of an American secondary school. These are daughters of French officers who were killed in the war. This is probably but the vanguard of a larger delegation of young women who, if the initial experiment is successful, will be sent to this and other similar institutions in this country for preparation to carry on work in French business houses. It will be necessary for them, after the war, to take the places of men who have lost their lives or been incapacitated by their injuries. The advantages of the plan, while marked on the side of commercial relations, are equally significant on the social side.

It is the wish of the members of the French high commission to have these girls made acquainted with the home life of the people of America, and to this end arrangements have been made by which they are to be taken into the homes of representative people of the city and treated not as boarders but as members of the families in which they may be placed.

It has been suggested that after the termination of the war a reciprocal arrangement may be made for the exchange of pupils between France and this country, and this may prove to be one of the factors that will bind together more firmly than ever the people of these two Republics.

AMERICANIZATION.

In the category of problems that has been thrown into especial prominence by the war, but whose solution belongs not only to war but to the future, is the great problem of the Americanization of the immigrant. Before the war it was a problem that engaged strenuous efforts only on the part of welfare and settlement workers and sociologists and remained in the eyes of a great many educators a more or less academic sentimental issue. To be sure, some provision had been made for certain aspects of the solution of the problem, e. g., for the teaching of English; and some States, such as Massachusetts, had even demanded compulsory attendance at evening school of minors of 16 to 21 who could not read and write up to the fourth-grade standard; but the enforcement of such laws was dependent upon the maintenance of evening schools by the towns and cities of the States, and far too few provided adequate facilities and financial support for such apparently extra curricula and irrelevant matter. But with the war came the sudden realization of the vital importance of the immigrant as a factor in the winning of the war. The revelation of the 1910 census that there were 5,516,316 people in the United States who could not read or write had evoked little comment and a few adequate remedial measures, but the fact that, of approximately 10,000,000 registrants for the selective draft, 700,000 could not sign their names aroused even the most apathetic to the serious impairment of our military efficiency revealed by such figures. With 1 out of 13 unable to respond intelligently to military or industrial orders on the one hand, and moral and spiritual appeals on the other, all because of lack of a common medium, the necessity for immediate action on the part of the schools became a matter of national importance. Additional facilities for Americanization were speedily provided, and the teaching of English to the immigrant as the first step in Americanization engaged the serious attention of school authorities all over the country.

THE IMMIGRANT AND THE NIGHT SCHOOLS.

There is a tendency to blame the immigrant for his failure to learn the language of his new country. But, as a general rule, his failure can be attributed less to his lack of desire than to his lack of opportunity. The opportunity must be given him in every community by ample provision for night schools that shall be looked upon as an integral part of the functions of the schools of America. Up to the present the night school has been treated as a foster-child, maltreated and even disinherited when the budget required. If the wisely conceived plan of the National Committee on Illiteracy is to be realized, i. e., the utilization of all the school machinery the country in the teaching of the foreign illiterate, the adminis tive wisdom of educational authorities will be taxed as never bef to solve the pedagogical and financial problems that will come fr this broadening of the school's functions.

THE TEACHING OF ENGLISH TO THE IMMIGRANT.

The fallacy that teaching English to foreigners is a simple, secondary matter, and may be safely entrusted to any who can be found to accept the pittance allowed such instruction, needs apparently to be demonstrated, for the policy of most night-school instruction in English rests upon this fallacy. It is time that educators realized that English for the foreigner is a foreign language and that the giving of instruction in foreign languages in our educational scheme has always presupposed a certain technique of instruction and a certain minimum at least of preparation and specialization.

ENGLISH AND THE PROBLEM OF AMERICANIZATION.

The selection, preparation, and organization of night-school teachers ought therefore to engage the most serious attention of school administrators, and particularly, because it is through the foreign language, English in this instance, that the immigrant's first introduction to the customs, thoughts, and ideals of the new country may come. The night-school instructor becomes, nolens volens, the interpreter of America to the newcomer—the mediator between the old and the new. To mediate effectively he should incarnate the best of his country and be able to approach the foreigner sympathetically. He should realize that he is one of the instruments that is trying to effect the blending of all the racial elements—the Slav, the Teuton, the Celt, the Anglo-Saxon—into a distinct racial cultural entity. That blending can not be commanded. Under the stress of war and under the compelling idealism of a Wilson, a "War Americanization" has taken place. The whole country has supported unitedly the compulsory service act and has given almost unwavering support to the policies of its President.

And the great struggle of all the races in a common cause will surely have constituted, when the war is over, a great step in that Americanization and democratization that all have desired. But with the conclusion of peace there will be lacking the urgent appeal for Americanization that the war has brought with it. The necessity will still exist, and it is even possible that, with the recrudescence of an intensified national feeling everywhere and the awakening of new nations from the suppressed national groups of Europe, the nationalistic feelings of the foreign groups in America may be intensified and provide added difficulties to the process of assimilation. It is for the educators of the country to realize the importance of Americanization not only as a war program but as a peace program, and always as a problem for whose solution specialists on immigration, social welfare, and settlement work should be invoked.

DIFFICULTIES IN THE WAY OF AMERICANIZATION.

The insistence on English as a prerequisite to Americanization is one thing, but the sudden and radical suppression of all foreign languages by city or State command is another, and is likely to defeat the very ends that are sought for. Presenting American ideals and customs is one thing, but attempting to *command* immediate and utter forgetfulness of the old country is another, and perhaps the very way to insure in this country unassimilable foreign groups after the model of those existing in such countries as Austria, Hungary, Russia, and Germany where repression has marked the treatment of alien groups. The normal course of Americanization in many parts of the country with respect to English has so far been from the uni-lingualism of the immigrant to the bilingualism of the second generation, to the uni-lingualism (English) of the third generation. Whenever the process is slower, there is the likelihood that there is maintaining itself a distinct racial unit that may be holding too vigorously to all of its foreign habits and customs. Such a state of affairs demands the attention of immigrant and welfare experts. An analysis may prove that a great deal of responsibility for it may rest on the American of older generations who by his indifference and social exclusiveness has thwarted the initial impulses toward Americanization. It is difficult to see, however, how this normal process can be greatly accelerated without detriment to the immigrant and to his new country. Competent observers have remarked the deterioration that is evident in that immigrant who has contemptuously stripped himself overnight of all the customs and habits of his old country, for in their stead he has too frequently appropriated a shoddy Americanism of the streets. The problem that confronts those who would deal intelligently with the immigrant is how to transmute the real value that the foreigner brings with him into the new Americanism. The common assumption that the foreigner has nothing to lose and everything to gain in the transition; that he has nothing of himself, his background, his country to give in exchange for what he receives, makes both him and the new country the losers. The spirit of Americans of older stock should be that so well expressed by the Secretary of the Interior, Mr. Lane, in his opening address at the National Conference on Americanization (Apr. 3, 1918). The keynote of the conference, "Our Responsibility," was struck in this address. His frank recognition of the seriousness of the problem, his assumption for the shoulders of the older Americans of their great responsibility in its solution, and the sympathetic spirit with which he meets the immigrant need to become the common possession of those school authorities into whose hands are to a great degree committed the solution of the great issue. To quote:

> We are trying a great experiment in the United States. Can we gather together from all ends of the earth people of different races, creeds, conditions, and aspirations, who can be merged into one? If we can not do this, we will fail. * * *
>
> There is no such thing as an American race, excepting the Indian. We are fashioning a new people. We are doing the unprecedented thing in saying that Slav, Teuton, Celt, and the other races that make up the civilized world are capable of being blended. * * * Out of this conference should come, not a determination to make more hard the difficult way of those who do not speak or read our tongue, but a determination to deal in a catholic and sympathetic spirit with those who can be led to follow in the way of this Nation.

To this blending, then, the Slav, the Teuton, the Celt, the Anglo-Saxon, the Romance, and other races are to contribute. That Italian boy born with the soul of an Italian poet must contribute that poetic soul to America. If in his Americanization he loses it, both he and America have lost. That Slav with his wealth of folk song and legend must contribute that to America. It is only thus that there shall come to pass that great new America in which shall be fused the first attributes of all peoples and races. Toward the consummation of that end educators must devote their best efforts.

ELIMINATION OF GERMAN AND THE TEACHING OF FOREIGN LANGUAGES.

Under the pressure of popular feeling, the teaching of German was forbidden in thousands of communities in America. The agitation in favor of its elimination was such that few school boards or superintendents insisted on its retention. New York eliminated all beginners' classes, thus abolishing all German in three years. Philadelphia abolished it entirely. Many, but by no means all, of the larger cities of the country followed suit.

Some whole States, such as Iowa, Delaware, Montana, etc., forbade the teaching of German in all schools.

The attitude toward this question in some of the more conservative of the larger cities is illustrated by the following paragraph from the last annual report of the Portland, Oreg., schools, L. R. Alderman, superintendent:

> I have been asked repeatedly concerning the attitude the Portland schools will take regarding the teaching of German and French. Some have asked if we expect to do away with the former and increase the work in the latter.

Now, it is well known that Americans are deficient in language study. Europeans have been stimulated to understand the tongues of their near neighbors; but separated as we have been by great oceans, we have lived on without feeling the need of mastering any language save our own. But now comes the present stimulus. We are concerned as never before in our national life with events and developments in Europe. We wish to gain for ourselves the fine literature, art, and science of the Old World. We confidently trust that a time is near at hand when all nations will be united in a compact of enduring peace; and when such a time comes we all shall need to know the languages of other nations. The boys and girls in the high school will be the leaders of the coming age. They must be prepared to meet the requirements at that time. Spanish must be learned, French must be learned, German must be learned, and learned with more enthusiasm than ever before.

The results on the education of the country can not be measured as yet. One of the immediate results was the rapid increase in the teaching of Spanish. The lack of properly equipped teachers of Spanish seemed to be no barrier; the jobless teachers of German became teachers of Spanish almost overnight. Courses were discontinued without notice and students' programs were shifted about in a demoralizing fashion. High-school students preparing for chemistry or other scientific professions, who had chosen German as an essential part of their preparation, were suddenly informed that the study of German even for such purposes was not necessary.

American educational authorities would do well at this time to consider the report presented (in 1918) by the committee appointed by the prime minister to inquire into the position of modern languages in the educational system of Great Britain. It was a strong committee, presided over by Stanley Leathes, a civil-service commissioner and one of the editors of the Cambridge Modern History, and including several distinguished persons, such as Sir Maurice de Bunsen, late ambassador at Vienna; Dr. H. A. L. Fisher, now minister of education; Dr. Walter Leaf, the well-known banker and translator of Homer. The report emphasized the special need for foreign languages for the conditions after the war and asked for increased instruction in modern languages. It placed French at the head of the list both for cultural and commercial purposes, and German close behind it, and then Italian, Russian, and Spanish. It came "to the conclusion that it is of essential importance to the nation that the study of the German language should be not only maintained but extended." To what extent the findings and conclusions of the Leathes committee lack pertinence for American conditions is a question that ought to be answered by the same type of scientific investigation that prompted the research of the Leathes commission. It is obvious, however, that British ranking of Spanish is too low for American conditions, in view of our colonial and South American relations.

JUNIOR HIGH SCHOOLS.

The rapid growth of junior high schools has been one of the outstanding educational developments of the years 1916-1918. Whenever a reorganization of the school system has been under contemplation, the organization of a junior high school seems to have found favor. The reasons for its favor lay somewhat, to be sure, in the fact that it seemed to involve no such violent change as would disorganize or demoralize even temporarily at least the school organization. And that is, of course, a commendable feature and has surely accelerated its introduction. But its comparatively easy incorporation into the present system contains dangers that must be avoided. It is patent that, in order to serve the ends that educators have purposed for the junior high school, it must involve a reorganization that is more than a mere numerical regrouping of the school years; it must contain and conserve above all those provisions for the educational guidance of the individual pupil in a wide, flexible, adaptable curriculum for which it was established.

It is not unlikely that five years may see its inclusion in the majority of the schools of the country. Prof. Davis, of Ann Arbor, has investigated the junior high schools in the North Central Association territory, 1917-18, and has found that about one-fourth (2,931) of the accredited schools contained the junior high school, and that one-fourth of this fourth (72) had been organized in 1917. The year 1918, Prof. Davis asserts, will show an even greater number of new junior high schools. The growth in the North Central Association has been fairly typical of the whole country.

In a plea for the reorganization of the school system of Greater New York, Mr. Somers submitted the following resolution, which was adopted by the board:

> That the board of superintendents be requested to appoint a special committee of three associate and five district superintendents to investigate and report upon the desirability and advisability of organizing our schools on the basis of a six-year elementary, a three-year intermediate, and a three-year high-school grouping.

VOCATIONAL EDUCATION.

The Great War has demonstrated as nothing else could, the national need for vocationally trained men and women. In recognition of that need the Sixty-fourth Congress passed the Smith-Hughes Act, which was signed by the President February 23, 1917. It provides for the promotion of vocational education; for cooperation with the States in the promotion of such education in agriculture and the trades and industries; for cooperation with the States in the preparation of teachers of vocational subjects; and for the apropriation of money and the regulation of its expenditure. The moneys set apart by Congress are granted on a graduated scale, beginning with $1,860,000 in 1917–18, and increasing to $7,367,000 in 1925–26, at which amount they are continued indefinitely. The amount appropriated to any State must be matched by that State, to become available. Under the impetus of the Smith-Hughes Act vocational education has taken a great leap forward. The movement in support of trade schools and continuation schools has been accelerated. It is obvious that, with the shortage of labor and building material and the constant readjustments in teaching force due to the war, the adequate introduction and trying out of vocational training on a nation-wide scale must wait for more normal times. In the meantime, investigation as to the best methods of arriving at the end desired can be carried on, for there are not lacking those who, admitting the wisdom of the Smith-Hughes Act, are fearful lest in its administration it fail to achieve the great and easily recognizable national benefits for which it was passed. The Carnegie Foundation, for example, has reached the conclusion that the Smith-Hughes Act is reproducing the history of the Morrill Act in involving the Federal Government in great expenditures of money before a sound educational policy and system of supervision have been formulated. There are some educators who, welcoming the idea of more vocational training, see the unity of the educational system threatened—class education fostered by a kind of enforced predestination of trade or profession; in other words, that type of dualism in education inaugurated that has existed in Germany and must not be incorporated into American education, just at a time when Germany is reverting to an "Einheitschule" in an attempt to correct the evils of her undemocratic class education. It would seem that the whole matter is one which wise administration can solve by a frank recognition of the dangers involved, and by a scientific endeavor to remove these dangers.

THE GARY SCHOOL.

Vocational education after the Gary School type received a setback in New York City with the election of Mayor Hylan. Introduced as a part of a political program by Mayor Mitchell, it remained always a political issue and was continually subjected to the passion of political struggle. It was one of the chief issues in the last mayoralty campaign, and went down to defeat with its sponsor. The new school board under the new administration proceeded at once to "de-Garyize" the schools, and with the election of Mr. Ettinger as superintendent it is quite likely that the so-called Ettinger plan, with its prevocational opportunities for the seventh or eighth grades, will be generally introduced. The Ettinger plan may, of cou lead to the junior high school or at least some compromise with it. Advocates of the Gary School in New York City will always f that the new system was not sufficiently tested, that four years' Gary izing of only a few schools did not provide sufficient data for its summary rejection. Opponents of the Gary school, unaffected by the political aspects of the question, can retort that the introduction of such a radical departure in such a vast organization as that of the New York schools was sure to meet with insuperable difficulties. The failure of the Gary schools in New York can as yet hardly be looked upon as an indictment of the Gary School scheme except as to its applicability to all the conditions of New York. Other communities may find in it all that Gary has found in it. Whatever may be the losses that may have come to New York through its adoption and rejection, the Gary School idea has at least served to accentuate the great import of vocational training for the whole country by the publicity that the New York experience has given it.

MILITARY TRAINING IN THE SCHOOLS.

Even before America's entry into the war the question of military training in the schools had become a much debated issue. Some States, such as New York, had by State legislation provided for military training in the schools of the State. The consensus of the opinion of educators opposed its introduction, and the committee on military training of the department of superintendence presented a report against it at the annual meeting of the superintendents in 1917. The report was adopted almost unanimously. The committee in its recommendations (1) asked for universal military training for young men 19 to 21 years of age, (2) protested against military training and military drill in the elementary or secondary schools, (3) advocated thorough compulsory physical training for boys and girls, (4) favored compulsory medical inspection, (5) encouraged outdoor camp life and camp activities, (6) placed new emphasis on patriotic and civic service as a prominent feature of an American education.

WAR ACTIVITIES IN THE SCHOOLS.

The availability of the schools for war purposes became apparent soon after the declaration of war. The school children became volunteers in Liberty Loan drives, Red Cross drives, and in every activity in connection with the war in which they could partake effectively. It is not too little to say that they played a vital part in the material and spiritual organization of the country in support of the war. Nor was their activity confined to the school year. Thousands of boys were mobilized during the vacation months for work on the farms, and it has been due to their efforts that the farmer has been able to meet the shortage of labor and to harvest his crops. Thus in a very direct way the schools have come to the support of the American Army in France and to the vast suffering civilian populations of the allied countries.

CONCLUSION.

The period in which we are living is one of rapid flux and transition, and those in control of public education must so recognize it. They must be ready to meet every emergency. They must be prepared to cope with the problem of the returned, disabled soldier. Thy must keep open-minded toward all the great problems of reconstruction and the radical readjustments they may bring with them. America's experiences in the war will certainly lead her to certain new conclusions. But it is well to be reminded that European countries have a three years' start on the problems with which we must cope. We can learn from them. Educational journals are wisely opening their pages to detailed analyses of the changes that are taking place in the educational thought of Europe. If we are to remain abreast, we must even now be grappling with the same problems that have made for such radical revisions in the educational policies of the warring countries. It is only thus that we can prepare for the great reconstruction.

II. THE SMALLER CITIES.

(With less than 25,000 population.)

By W. S. Deffenbaugh,
Specialist in City School Administration.

A chapter treating of progress in education for a period of one or two years must deal principally with the change in the machinery of education. It is not the purpose of this chapter to show how much better children in the small cities are being educated now than a year or two ago. The aim is to summarize changes in administrative machinery observed from correspondence with superintendents in the smaller cities, from city school reports and other publications.

Among the significant changes that may be mentioned are the enactment of a general education law for the cities of the State of New York, simplified school-board rules and regulations, a greater interest in the scientific study of educational problems, salary schedules based to a certain extent upon merit, greater attention to industrial work, home economics, and physical training, and the use of the schools f disseminating information regarding the war.

ADMINISTRATION.

During the past two years, few if any changes by special charter provision have been made in the manner of electing school-board members, in the number of members, or in the relation of the school board to the city council. In fact, few of the smaller city schools are now governed in any way by special charter provision. Most of the States have enacted general education laws to include the cities of the State. The State of New York is the latest to enact such a law. In that State the school systems of the several cities were operated and controlled under the provisions of nearly 250 separate acts enacted from the year 1829 down to and including the year 1915. These various laws of the legislature contained 600 pages of printed matter simply to create the necessary machinery to operate the school systems of the several cities. Many of these acts had become obsolete, many conflicting provisions were found in them, and in some cases every section of the law relating to the school system of the city had been amended, in some instances a single section having been amended a dozen or more times. Many of the provisions of these laws were mandatory in instances where the statutes should give school authorities discretionary power, and the statutes relating to the great majority of these cities so limited and restricted the functions of the local school officers that they did not have the authority to exercise many functions which a board of education should exercise in order to maintain and operate a school system in accordance with the public sentiment of the city over which it exercised jurisdiction.

The situation in the State of New York was the cause of many special bills being introduced into the legislature each year for the purpose of amending the several acts so as to give local school authorities the power to execute certain powers in relation to the local school systems which are desired by the people of the several cities. For illustration, one city went to the legislature to obtain authority, which it did not have under existing law, to submit to the voters of that city a proposition to expend $40,000 for the erection of an elementary school building. Another city which had erected a new school building and abandoned an old one did not possess the authority to sell the abandoned school property. It was necessary to go to the legislature to obtain authority for that purpose.

In order to provide better administrative machinery for the schools of the several cities of the State, the education department prepared and caused to be introduced into the legislature a bill which repealed all the special acts and substituted for the 600 pages of printed matter a law which contains about 20 pages. The bill was enacted into law during the session of the legislature in 1917.

The chief advantages claimed for this law are:

1. It is simple and clear and easily understood by those who must administer it.
2. It confers broad powers upon boards of education in the several cities of the State, so as to operate and manage their schools as the residents of the city may desire and to adjust the school organization to the necessities of new and changing conditions from year to year.
3. It gives greater powers to localities than they have ever before exercised, and it eliminates many of the useless mandatory and restrictive provisions contained in the old, complicated, and obsolete statutes.
4. It fixes responsibility upon those who manage the schools.

That the powers and duties conferred by the general education law upon city boards of education in the State of New York are broad and permit cities to expand their educational system is evident from the fact that school boards have power to prepare an annual estimate for the following purposes:

(*a*) The salary of the superintendent of schools, associate, district, or other superintendents, examiners, directors, supervisors, principals, teachers, lecturers, special instructors, auditors, medical inspectors, nurses, attendance officers, clerks, and janitors, and the salary, fees, or compensation of all other employees appointed or employed by said board of education.

(*b*) The other necessary incidental and contingent expenses, including ordinary repairs to buildings and the purchase of fuel and light, supplies, textbooks, school apparatus, books, furniture and fixtures, and other articles and service necessary for the proper maintenance, operation, and support of the schools, libraries, and other educational, social, or recreational affairs and interests under its management and direction. The provisions of this section in regard to the purchase of light shall not apply to a city having a population of 1,000,000 or more.

(*c*) The remodeling or enlarging of buildings under its control and management, the construction of new buildings for uses authorized by this chapter and the furnishing and equipment thereof, the purchase of real property for new sites, additions to present sites, playgrounds, or recreation centers and other educational or social purposes, and to meet any other indebtedness or liability incurred under the provisions of this chapter or other statutes, or any other expenses which the board of education is authorized to incur.

SCHOOL BOARD RULES AND REGULATIONS.

The rules and regulations of a school board are not often revised, but a sufficient number of school boards have taken this action within the past few years to show that the tendency is toward fewer and more definite rules. Too many regulations seriously confuse. The teacher who manages her school with the least effort usually makes few rules. School boards can learn from the experience of teachers in this respect not to hamper the superintendent and others by making rules to cover every conceivable point.

The rules and regulations adopted by the school board at East Orange, N. J., may be given as an example of the kind that most progressive school boards are adopting. These rules are in accordance with two interesting principles of school adminstration: (1) Legislative action by the school board as a whole; (2) centralization of executive authority in the superintendent.

Article II of the rules and regulations of that city, which treats of the organization of the school system, and Article III, relating to the duties of the executive officer, are quoted as a type of the kind of rules that school boards in the smaller cities could well adopt:

ARTICLE II. ORGANIZATION OF THE SCHOOL SYSTEM.

SECTION 1. *Departments and Their Functions.* There shall be three departments, to be known as the Department of Instruction, the Department of Records and Finance, and the Department of Buildings and Grounds.

Instruction. The department of instruction shall comprise all the activities that directly affect the welfare of the pupils, such as teaching, discipline, attendance, and medical inspection. The superintendent of schools shall have charge of this department.

The department of records and finance shall comprise the more strictly business activities of the board, such as keeping records, the making of contracts, purchases, and the custody and expenditure of funds. The secretary of the board shall have charge of this department.

Buildings and Grounds. The department of buildings and grounds shall be responsible for the physical upkeep of the school property, including repairs, renovation, and new construction. The supervisor of buildings and grounds shall have charge of this department.

ARTICLE III. EXECUTIVE OFFICERS AND DUTIES.

SECTION 1. *Superintendent of Schools.* The superintendent of schools shall, under the direction of the board of education, and in accordance with its rules and regulations, have the general management of the school system.

Duties. He shall, unless excused by the board, attend all regular and special meetings of the board of education, and of committees, and shall have a right to speak, but not to vote.

All communications to the board from principals, supervisors, teachers, or other employees shall be submitted through the superintendent of schools. Communications from teachers shall also be first submitted to their respective principals. All such communications shall be referred to the board at the next regular meeting by the superintendent with or without recommendations. But nothing in this paragraph shall be construed as denying the right to appeal to the board of any member of the school system.

The superintendent shall recommend to the board for appointment principals, supervisors, teachers, and others to be engaged in the work of instruction or discipline, also school doctors, nurses, and attendance officers. With the advice of the supervisor of buildings and grounds, he shall also recommend for appointment engineers, janitors, mechanics, and other assistants. In the same manner he may recommend the removal of any employees whose services are no longer required. All recommendations provided for in this section shall be made in writing, excepting in the case of substitutes for temporary periods, where no action by the board is necessary.

The superintendent shall assign principals, teachers, and others employed in the department of instruction to their duties, and make necessary transfers, reporting such action to the board at the next regular meeting.

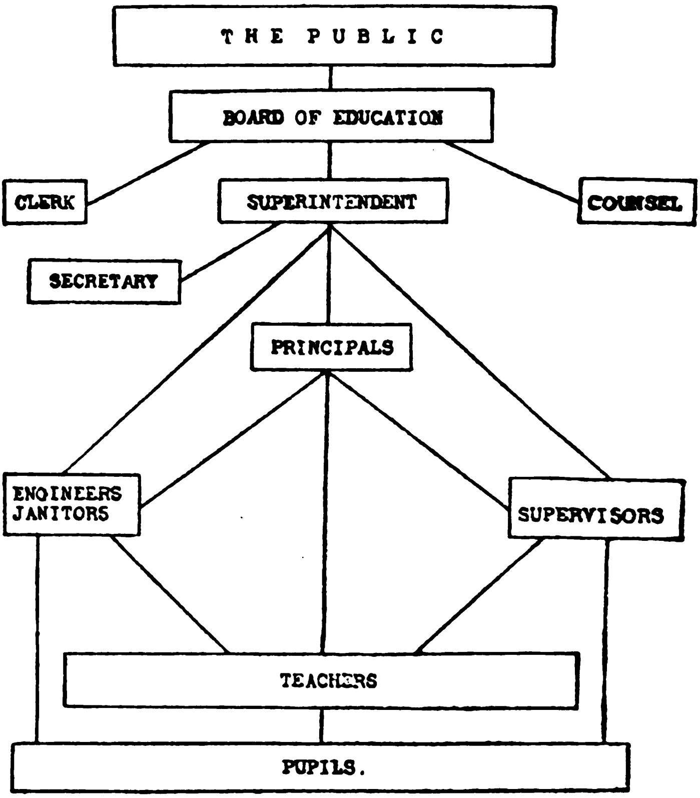
He shall, with the cooperation of principals and supervisors, plan courses of study, time schedules, etc., for all departments, and supervise their operation; but he shall submit to the board for its approval any important changes which call for a radical departure from accepted policies, or which require increased expenditure of money.

With the cooperation of principals and supervisors, the superintendent shall recommend appropriate text and reference books, school supplies, apparatus, and furniture for the use of the schools, and shall submit such recommendations to the board for its approval.

He shall prepare the annual budget before April 1 and submit it to the board at the next regular meeting.

He shall submit a report to the board in writing at least once a month, with recommendations for action. This report shall be mailed to each member of the board at least 48 hours before the board meeting, and any further particulars may be submitted in writing at the meeting. He shall prepare a general report on the condition of the public schools at the close of the school year. He shall prepare and submit to the board any special reports which may be required. He shall attend to all other necessary details of administration, and shall faithfully perform such other duties as may be required of him by the board of education or the laws of the State of New Jersey.

Huron, S. Dak., and Mansfield, Mass., may be given as examples of other cities that have simplified the administrative machinery of their school systems. The following chart shows the plan of the organization of the school system of Huron:



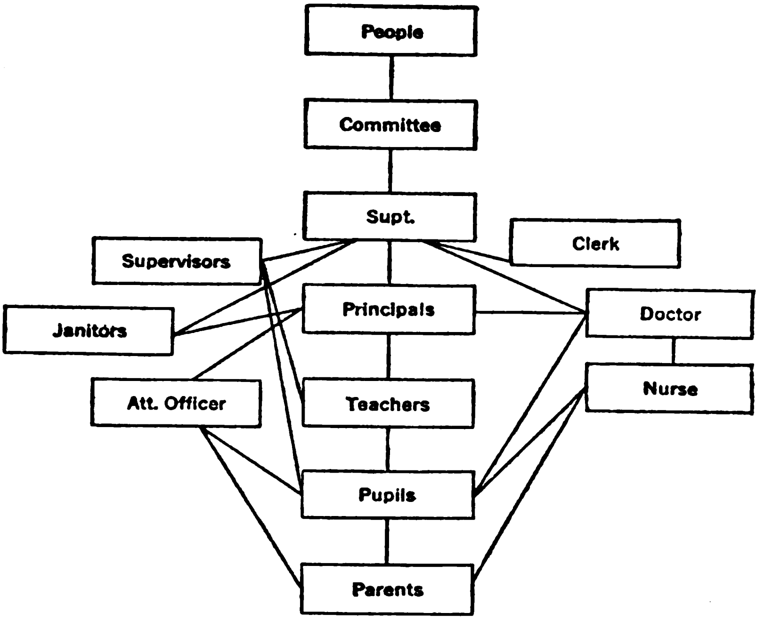
HURON PLAN OF SCHOOL ORGANIZATION

By this plan the board of education legislates, the superintendent executes, the board acts as a whole without standing committees. The board of education holds the superintendent responsible for an efficient execution of its orders. This reponsibility is distributed by the superintendent to all members of his staff, the principals having the responsibility of the first degree next to the superintendent. Within his or her particular field of activity, the superintendent holds each of his staff responsible for effective results, the only way by which to secure them.

With the delegation of responsibility, there must go commensurate authority. The superintendent must uphold the authority of each member of his staff within his or her field of responsibility. Pupils are amenable to the management of their teachers and of special supervisors, and at times to that of janitors and engineers. The teachers work under their principals and cooperate with the janitors. The principals, janitors, and supervisors cooperate directly with the superintendent, who is the means of communication between all members of his staff and the board of education.

The school board at Mansfield, Mass., may also be mentioned as having simplified the organization of its school system. The superintendent has been made secretary of the school board, thus centering the executive work under one head. This makes the superintendent responsible for the bookkeeping, purchasing, correspondence, records, and other clerical matters, as well as for the administration and supervision of instruction. The making of the superintendent the secretary of the school board in a small city should always carry with it sufficient clerical assistance to relieve him of details.

The organization of the school system at Mansfield in relation to the community may be pictured as follows:



It will be noted that—(1) the board is responsible to the town for the control of the schools; (2) the superintendent is responsible to the board for the expert management of the schools; (3) the principals are responsible to the superintendent for buildings, teachers, pupils, and janitors; (4) teachers and janitors are responsible to the superintendent and principal.

In the three cities just cited as examples of those that have reorganized the administrative machinery of their schools all standing committees have been abolished. School boards as a rule are reducing the number of such committees or discontinuing them altogether. The plan of having many committees originated with many school boards when they were larger than they now are. As a rule the larger boards have more committees than the small boards.

Though the size of school boards has been reduced by legal enactment this evil of many standing committees, characteristic of the large board, persists in not a few cities. These have hung on as a sort of vermiform appendix, having no useful function and often causing internal trouble. In not a few of the smaller cities there are still as many standing committees as there are board members, it not being uncommon for each member to hold a chairmanship, which is about the only excuse for the existence of many of the committees, since there is nothing in particular for them to do. In the absence of a genuine need, too frequently they take upon themselves duties that belong to the professional experts employed by the school board. On the other hand, if the board acts as a whole, responsibility can be placed on each member and not on an elusive committee; all business, not part of it, is considered by the entire board and all members must be intimately familiar with every phase of it. Such an arrangement insures better correlations and more harmonious expenditures, expedites business, and avoids the shifting of responsibility. One argument sometimes advanced in favor of committees is that they can meet and go over the work assigned them without having it discussed openly in board meeting. The argument that school business should be transacted through committees so as not to attract the attention of the public is not valid in a democracy. The school board represents the people who should be kept informed of the disposition of all school matters that affect the general public. There are times, it is true, when it is necessary for the school board or a special committee to discuss in private matters in which only individuals are interested. The school boards that have reduced the number of their standing committees, or, better, that have abolished them, have without doubt taken a step forward in the efficient administration of their schools.

THE SUPERINTENDENT.

School board rules and State legislation have gradually recognized the importance of the office of city superintendent of schools. The qualifications for the office have been raised and more power granted the superintendent. For example, the recently enacted general education law of the State of New York takes cognizance of the city superintendent, setting forth the qualifications for a city superintendent in that State and his powers and duties. A provision of the law is that in all cities except in those of the first class a superintendent shall serve at the pleasure of the board. This is an unusual provision. The argument for such provision is that if a superintendent is to be the executive officer of the school board, he should be requested to resign at any time he can not or does not carry out the plans of the board, and that it means a longer tenure for the majority of superintendents. When superintendents are elected for a term of two or three years and are required to come up for reelection, all the enemies he has made concentrate their forces upon the school board. The expiration of a superintendent's term is a signal for them to act. If he serves at the pleasure of the board, there is no one time when opposition is invited.

The standard for the office of city superintendent is placed by the recently enacted general education law of the State of New York on a higher basis than in most other States. He must be—

1. A graduate of a college or university approved by the University of the State of New York, and have had at least five years' successful experience in the teaching or in the supervision of public schools since graduation; or

2. A holder of a superintendent's certificate issued by the commissioner of education under regulations prescribed by the regents of the University of the State of New York, and have had at least 10 years' successful experience in teaching, or in public-school administration, or equivalent educational experience approved by the commissioner of education.

The superintendent of city schools in the State of New York shall possess, subject to the by-laws of the board of education, the following powers and be charged with the following duties:

1. To enforce all provisions of law and all rules and regulations relating to the management of the schools and other educational, social, and recreational activities under the direction of the board of education, to be the chief executive officer of such board and educational system, and to have a seat in the board of education and the right to speak in all matters before the board, but not to vote.

2. To prepare the content of each course of study authorized by the board of education.

3. To recommend suitable lists of textbooks to be used in the schools.

4. To have supervision and direction of associate, district, and other superintendents, directors, supervisors, principals, teachers, lecturers, medical inspectors, nurses, auditors, attendance officers, janitors, and other persons employed in the management of the schools or the other educational activities of the city, under the direction and management of the board of education, to transfer teachers from one school, or from one grade of the course of study to another grade, and to report immediately such transfers to the board for its consideration and action; to report to the board of education violations of regulations and cases of insubordination, and to suspend any employee until the next regular meeting of the board, when all the facts relating to the case shall be submitted to the board for its consideration and action.

5. To have supervision and direction over the enforcement and observance of courses of study, the examination and promotion of pupils, and over all other matters pertaining to playgrounds, medical inspection, recreation, and social center work, libraries, lectures, and all other educational activities and interests under the management, direction, and control of the board of education.

6. To issue such licenses to teachers, principals, directors, and other members of the teaching and supervisory staff as may be required by the board of edu-

cation in cities in which the board requires its teachers to hold qualifica in addition to or in advance of the minimum qualifications prescribed by law.

Whether or not the powers and duties of city superintende should be definitely defined by general State law is still a question. The school law should, however, define the more important duties of the superintendent, as does the general education law of the State of New York.

In those States where the school law does not define the powers and duties of the city superintendent of schools, school boards have within the past few years accorded him many of the prerogatives that belong to an executive officer. They have made the office a more dignified one, calling for men with executive as well as with teaching ability.

For this reason a new type of superintendent is coming to the front. Instead of the mere pedagogue, out of touch with the world, there is the practical, scientific administrator who is able to show what the schools are accomplishing. He can show the public how the school funds have been expended. He has developed school accounting so as to indicate with definiteness the purpose for which all money is spent in terms of the particular service secured, and also with respect to the particular division, school, or subject taught. Not until within the past few years did school boards, or, indeed, any individual in the smaller cities, know how school funds were expended. Money was appropriated on a "hit-or-miss" plan. The high-school expenses might be costing four or five times as much per pupil as the elementary grades. The cost of heating 1,000 cubic feet in one building might be several times as much as for another building. Latin might be costing 25 cents per pupil recitation and other subjects only 5 or 6 cents. No one knew. There was no attempt made to find out where every cent of the funds went. There was no attempt at detailed budget making. Now all progressive school boards and superintendents can trace every dollar from the time it leaves the taxpayer until it is expended for the object intended. It is true that in the smaller cities the number of such boards having this information is not large; but it is becoming larger each year.

The new type of superintendent has also learned to show more definitely what children have achieved. He is using more exact measurements, especially for the formal subjects. His annual reports have been much improved, being no longer abstract treatises or a mass of uninterpreted facts. The frankness with which many of the superintendents in the smaller cities set forth conditions is an indication for the better that has come about in the administration of the small city school. For instance, the whole situation regarding the progress of pupils through the grades, the school attendance, and achievement of pupils measured by well-known standards are presented, and recommendations made on the basis of fact.

THE SURVEY IN SCHOOL ADMINISTRATION.

In this connection mention should be made of the improvement of school administration in the small city through the influence of the school survey. Though the immediate results where surveys have been made have not always been all that could be desired, they have, on the whole, been helpful to school administrators. They have at least shown a method of attacking educational problems and they have aroused greater interest in school administration, especially in the approach from the fact side.

Among the small city schools that have been surveyed during the past two years are Brookline, Mass., Elyria, Ohio, Janesville, Wis., Winston-Salem, N. C., and all the cities of Arizona and South Dakota in connection with State-wide surveys.[1]

Besides the general surveys, there have been surveys of specific phases of school work. At Fort Dodge, Iowa, a survey was made to discover the chief reasons why so many boys leave the schools of the city before completing the course; in what grades the greatest number of boys drop out; what they do after leaving school; what their earning capacity is; and what readjustments should be made in the courses of study to make them meet the needs of the boys of the community.

At Virginia, Minn., a study was undertaken to determine what is required of boys and girls who seek employment after leaving school. The survey covered not only the trades, such as machinists, plumbers, etc., but all work which requires the employment of men and women, boys and girls. The information for the survey was collected from three sources: (1) Industrial surveys made in various parts of the country; (2) reports and expenses of institutions, both private and public, working along the lines of industrial education; and (3) a survey of the local industries.

As a result of the survey the school board adopted the plan of giving students in the junior high school general work in the various departments of vocational training, work which would be practically the same as that offered under the head of manual training. During this period every effort is to be made to assist the students who are following vocational work to decide which of the courses offered they are best fitted to follow. The senior high school is to be used as the time to specialize in this course or trade, so that at the end of the high-school course the graduate will have had four years of work in the trade which he has selected to follow. It is not the expectation of the school board in adopting this plan that after four years of work in the senior high school the graduate will be a finished tradesman but that he will simply have made a very good start toward the mastery of his trade.

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[1] For a discussion of the reports of these surveys, see the chapter on educational surveys, reprinted as Bulletin, 1918, No. 45.

The survey committee recommended: That the work in the industrial department, both for boys and girls, be made practical; that it be suited to the needs of the industries in the community; that a certain amount of commercial work be brought into the shops; and that experienced men be employed from the industries to teach shopwork. The committee was of the opinion that, while the greater part of the instructors should be experienced workers, it must not lose sight of the fact that teaching others is a profession, and that a few trained teachers should be employed to systematize at least the elementary work of the student and give him a well-rounded education.

The survey, according to the report of the committee, developed the fact very clearly that something has been lacking in the school system. The employers of labor, upon first approach, were skeptical about what the school could do to better conditions in the industries and to train boys to take their places in the industries. They seemed to question the possibility that work of this practical character could be introduced into the schools, but after the committee explained that experienced workers would be employed as instructors and that the employers would be called upon to visit, criticize the work, and give suggestions, they all agreed that the committee was upon the right track, and that this matter should have been considered and put into effect long ago. The fact was also brought out that the students in the community lacked the quality of stick-to-it-ive-ness, and that they overestimated the value and ability of themselves. The employers suggested that it was high time that the school and the community cooperate in bringing about a better spirit toward the work. The survey committee continued its report by making recommendations regarding the work to be done in the schools in respect to the industries of the community.

As a result of the surveys made by persons not connected with the schools surveyed, more superintendents are surveying their own schools. If the outside survey has accomplished nothing more than to cause school men to study their own schools, it has been worth while. Whether surveys by persons outside the school system will continue is a question. One thing is certain—there will be more self-surveys. Superintendents surveying their own schools may call in some one as consulting specialist to help them interpret the facts.

The better type of school report that some superintendents are preparing is evidence that they are analyzing conditions more carefully than before, and that in effect they are surveying their own schools. There is no reason why a superintendent can not make an exhaustive study of his school system, especially if he has had college courses in school administration and management. He is on the ground all the time and should know conditions better than any one else. The statistical data that the surveyor collects often after much labor should be in the superintendent's office at all times. It should not be necessary for an outside surveyor to spend a week or more collecting data regarding school attendance, progress of pupils through the grades, education and experience of teachers, etc. These should be on file. A superintendent can measure the achievement of pupils by means of standard tests as well as any one else. He has access to the scores made by pupils in other cities and can easily make comparisons and draw conclusions. In the matter of finance he can show unit costs and make interesting comparisons just as effectively as can any one brought in from outside the school system.

Among the late school reports that may be classed as instructive self-surveys are those of Southington, Conn.; Huron, S. Dak.; Globe, Ariz.; Anderson, Ind.; Bristol, Va.; Lawrence, Kans.; and Kane, Pa.

The 1916–17 report of the schools at Huron, S. Dak., discusses organization and administration, physical environment, teaching force, pupil accounting, quality of instruction, pupil achievement, schools costs. The report contains 35 statistical tables and 39 charts to illustrate relation of attendance to enrollment, preparation of teachers, grade distribution, etc.

The superintendent of schools at Lawrence, Kans., in his report for 1916–17, asks and answers 90 questions regarding the schools of that city. Among the questions asked and answered are:

> In what proportion does Lawrence apportion school money among the several expense items?
> What do these figures show?
> What probable future demands will these several items make upon Lawrence?
> What changes will this necessitate in the Lawrence budget?
> How does the high cost of living affect the schools?
> How many children failed of promotion?
> How many children skipped a grade?
> In what subjects do children make the most failures?
> Is Lawrence peculiar in this respect?
> What do we know of failures for all the children?
> What is the retardation in each building?
> Have we any basis of comparison in the matter?
> What does the comparison show?
> What has been done to improve the situation?

The report thus continues to answer questions that any searching investigator would ask, and which the school patron would wish to know.

SALARIES AND PROMOTIONS OF TEACHERS.

Until within the past two years the educational and professional standards for teachers had been raised slowly until most of the smaller cities required applicants for teaching positions to be high-school graduates with an additional year or two of professional training, or in lieu of such training a year or two of successful experience. In not a few cities the standard has been difficult to maintain, owing to the fact that many teachers have recently left the profession to accept more lucrative positions with the National Government or with private corporations. In many of the schools in smaller cities it is not unusual for a teacher to receive a salary of less than $600 a year. Since positions elsewhere, paying $1,000 or $1,200 a year, were easily obtained, the teaching corps in many of the smaller cities has been almost depleted of its experienced teachers. As a result those less experienced and less well prepared have to be employed. Many married women who taught school 10 or 15 years ago have returned to the classroom. The plan of employing married women who have taught school is to be preferred to that of employing girls just out of high school, from the fact that the married women, though they may not have completed a high or normal school course, have a broader view of life and know children much more intimately. In order that those who formerly taught and who are again taking up teaching may know something of recent developments in educational methods, a superintendent should hold numerous conferences to assist these teachers in gaining the newer point of view in educational methods. As many as possible should be induced to attend summer schools for teachers.

If school boards had increased salaries in proportion to the increase in living expense, there would in all probability not now be such a shortage of teachers. Some, however, would have left the profession, thinking that they could render better service for their country in other lines of work.

In order to keep the schools running some school boards have given teachers bonuses of from $50 to $100 a year. Others have granted salary increases ranging from 5 to 35 per cent, the usual increase being only 10 per cent. Salaries in other professions or occupations have increased much more. Although the cost of living has more than trebled, teachers' salaries have remained almost stationary. The schools in many of the smaller cities can not help but suffer because teachers resign to accept more lucrative positions. Resignations of teachers were all too common before the war, few teachers remaining in a city more than five years. Conditions have been going from bad to worse. There is but one way to check this general movement away from the profession—salaries commensurate with the preparation required and with the exacting demands made upon a teacher's time must be paid. The increase in salary should be at least 40 per cent over the salary paid two years ago. Increases of 5 and 10 per cent have little or no effect in holding teachers who have been offered positions at twice their present salary.

In determining a salary schedule the following principles should be recognized:

1. The teacher at the very least should receive a living wage. This should include enough to allow her to improve herself professionally and to save something each year in anticipation of the time when she must retire from active schoolroom service.

2. The maximum salary should be sufficient to retain the service of the most desirable teachers.

3. In the administration of a salary schedule, superior work should be recognized.

In many of the school systems where merit is a factor in the promotion of teachers, superintendents have devised various plans for grading teachers. Of 780 superintendents reporting, 115 have formulated schemes for grading teachers. Whether such rating plans can be carried out successfully is a question, especially if the rating scheme is a detailed one. If a teacher is to be promoted upon merit, she should know what standards the superintendent has in mind, so that she may attempt to attain them. It is not possible to give examples of all the many standards in use, but a few are presented to show what superintendents and others are attempting to do to develop subjective standards for the testing of teachers. In some of the schemes which enumerate qualities or elements of good instruction the idea is that the qualities enumerated may serve as a basis for self-criticism and self-improvement on the part of the teacher. For instance, the superintendent of schools at Kalispell, Mont., who has prepared a teacher-rating plan, wisely says:

> With these standards as a suggestion, teachers need not wait to have weaknesses pointed out to them. Let no one understand that instruction and teaching ability will be judged solely or chiefly on the basis of the factors enumerated. The best part of the teaching process is what has been called "unconscious tuition." The habits the teacher is instilling, the taste she is cultivating, and the appeals she is making to the feeling and the volition of the child are more important than any of these elements. We are more concerned with what the children do than with what the child knows.

The following test is to be used by the teachers themselves to see that they are not overlooking some of the elements of success:

I. *Results.*
  (*a*) Development of pupils.
  (*b*) Growth in subject matter.
  (*c*) Attention.
  (*d*) Responsiveness of class.

II. *Technique in teaching.*
  (*a*) Organization of subject matter.
  (*b*) Choice of subject matter.
  (c) Skill in teaching how to study.

II. *Technique in teaching*—Contd.
  - (*d*) Skill in stimulating thought.
  - (*e*) Definiteness and clearness of aim.
  - (*f*) Skill and care in assignment.

III. *School management.*
  - (*a*) General care of room, blackboards, window shades, waste baskets, floors, etc.
  - (*b*) Ventilation.
  - (*c*) Care of wraps and wardrobes.
  - (*d*) Care of books and supplies.
  - (*e*) Care of desks (teacher's and pupils').

IV. *Professional equipment.*
  - (*a*) Understanding children.
  - (*b*) Use of English.
  - (*c*) Interest in the work.
  - (*d*) Manner of reacting on suggestions.
  - (*e*) Manner of receiving criticisms.

IV. *Professional equipment*—Contd.
  - (*f*) Loyalty to other teachers a school authorities.
  - (*g*) Manner of keeping records
  - (*h*) Times tardy during the year
  - (*i*) Days absent during the year.

V. *Personal equipment.*
  - (*a*) Health.
  - (*b*) Voice.
  - (*c*) Tact.
  - (*d*) Sympathy.
  - (*e*) Evenness of temper.
  - (*f*) Dignity.
  - (*g*) Personal neatness (dress, etc.).
  - (*h*) Cheerfulness.
  - (*i*) Orderliness.
  - (*j*) Winsomeness: appeal to children.
  - (*k*) Posture.

To receive promotion in the Kalispell schools beyond $960 a year a teacher must show marked success. All advancement in salary is upon the recommendation of the superintendent, confirmed by the board of education, which recommendation is conditional on ability to teach, professional spirit, attitude toward the school and the children, spirit of growth, and desire to excel.

At Marblehead, Mass., the teachers are classified by the supervisors and superintendent into five groups, on the basis of the quality of service they have rendered: 1. Those whose work is of so poor a quality that they should be dismissed from the service. 2. New teachers whose work has been unsatisfactory, but who show sufficient promise of growth and improvement to justify further trial. 3. Those who show litle, if any, improvement over the work of previous years. 4. Those who are strong teachers and do uniformly good work; who measure up well in all departments and show improvement from year to year. 5. Exceptional teachers whose work is superior; who possess unusual skill in teaching and show a large measure of initiative, resourcefulness, and power in stimulating pupils to achieve the most worth-while of the results that the school seeks to accomplish.

The school board of Ann Arbor, Mich., has prepared a salary schedule to supplement the regular one. After attaining the maximum salary allowed by the schedule, each teacher's salary is to be final for triennial periods. An increase of $100 above the maximum may be received the second triennial period by meeting, during the first period, the requirements of any one of the following plans:

PLAN I.

(*a*) Attendance on at least one annual session of some national educational organization meeting outside of Michigan.

(*b*) Attendance on at least one annual session of the Michigan State Teachers' Association meeting outside of Ann Arbor.

(*c*) Subscription for and reading of two educational periodicals, one of which shall not be devoted especially to the subject or grade taught by the teacher.

(*d*) Making reports on the meetings attended and the periodicals read as may be required by the executive committee and the superintendent of schools.

PLAN II.

(*a*) Gaining eight hours' credit for regular work in any university, college, or normal school, half of which shall not be in subjects or grades regularly taught by the teacher.

(*b*) Subscription for and reading of two educational periodicals, one of which shall not be devoted especially to the subject or grade taught by the teacher, and making reports thereon.

PLAN III.

(*a*) Spending two months in foreign travel and reporting as may be required by the executive committee and the superintendent of schools.

(*b*) Subscription for and reading of two educational periodicals, one of which shall not be devoted especially to the subject or grade taught by the teacher, and making reports thereon.

PLAN IV.

(*a*) Maintaining during the period a definite line of study that, in the judgment of the executive committee and the superintendent of schools, is equivalent to eight hours of university, college, or normal school work.

(*b*) Subscription for and reading of two educational periodicals, one of which shall not be devoted especially to the subject or grade taught by the teacher, and making reports thereon.

Any teacher who has gained the first increase of $100 may for the ensuing period gain an increase of $100 more by meeting the requirements of one of the foregoing plans other than the one by which the first increase was gained; but only two such increases shall be possible.

Failure to meet the requirements of some one of these plans during a triennial period will cause the loss of $100 per year in salary if an increase has already been gained.

Each applicant for increase beyond the maximum of the schedule must notify the superintendent of schools in writing, at the beginning of the school year, of the intention to seek an increase and state which of the plans has been chosen.

In the inauguration of this plan, any teacher who has taught three years or more at the maximum salary and has, during the past three years, met the requirements of any one of these plans, except as to reports, may receive the first increase during the current year, and any teacher who has taught two years or more may receive the first increase for the year after that in which the requirements of any one of the preceding plans have been met.

The following efficiency record, prepared by the department education of the University of Chicago, is in use in some of the scho reporting the use of subjective standards:

EFFICIENCY RECORD.

DETAILED RATING		V.P.	POOR.	MEDIUM.	GOOD.
I. *Personal equipment*—	1. General appearance				
	2. Health				
	3. Voice				
	4. Intellectual capacity				
	5. Initiative and self-reliance				
	6. Adaptability and resourcefulness				
	7. Accuracy				
	8. Industry				
	9. Enthusiasm and optimism				
	10. Integrity and sincerity				
	11. Self-control				
	12. Promptness				
	13. Tact				
	14. Sense of justice				
II. *Social and professional equipment*—	15. Academic preparation				
	16. Professional preparation				
	17. Grasp of subject matter				
	18. Understanding of children				
	19. Interest in the life of the school				
	20. Interest in the life of the community				
	21. Ability to meet and interest patrons				
	22. Interest in lives of pupils				
	23. Cooperation and loyalty				
	24. Professional interest and growth				
	25. Daily preparation				
	26. Use of English				
III. *School management*—	27. Care of light, heat, and ventilation				
	28. Neatness of room				
	29. Care of routine				
	30. Discipline (governing skill)				
IV. *Technique of teaching*—	31. Definiteness and clearness of aim				
	32. Skill in habit formation				
	33. Skill in stimulating thought				
	34. Skill in teaching how to study				
	35. Skill in questioning				
	36. Choice of subject matter				
	37. Organization of subject matter				
	38. Skill and care in assignment				
	39. Skill in motivating work				
	40. Attention to individual needs				
V. *Results*—	41. Attention and response of the class				
	42. Growth of pupils in subject matter				
	43. General development of pupils				
	44. Stimulation of community				
	45. Moral influence				
GENERAL RATING					

Recorded by.................................... Position................ Date..................

EXPLANATION OF TERMS.

I. *Personal equipment* includes physical, mental, and moral qualities.

1. *General appearance*—physique, carriage, dress, and personal neatness.
3. *Voice*—pitch, quality, clearness of schoolroom voice.
4. *Intellectual capacity*—native mental ability.
5. *Initiative and self-reliance*—independence in originating and carrying out ideas.
7. *Accuracy*—in statements, records, reports, and school work.
10. *Integrity and sincerity*—soundness of moral principles and genuineness of character.
13. *Tact*—adroitness, address, quick appreciation of the proper thing to do or say.
14. *Sense of justice*—fair-mindedness, ability to give all a "square deal."

II. *Social and professional equipment* includes qualities making the teacher better able to deal with social situations and particularly the school situation.

15. *Academic preparation*—school work other than professional. Adequacy for present work.
16. *Professional preparation*—specific training for teaching. Adequacy for present work.
17. *Grasp of subject matter*—command of the information to be taught or the skill to be developed.
18. *Understanding of children*—insight into child nature; sympathetic, scientific, and practical.
22. *Interest in lives of pupils*—desire to know and help pupils personally, outside of school subjects.
23. *Cooperation and loyalty*—attitude toward colleagues and superior officers.
24. *Professional interest and growth*—effort to keep up to date and improve.
26. *Use of English*—vocabulary, grammar, ease of expression.

III. *School management* includes mechanical and routine factors.

29. *Care of routine*—saving time and energy by reducing frequently recurring details to mechanical organization.
30. *Discipline (governing skill)*—character of order maintained and skill shown in maintaining it.

IV. *Technique of teaching* includes skill in actual teaching and in the conduct of the recitation.

31. *Definiteness and clearness of aim*—of each lesson and of the work as a whole.
32. *Skill in habit formation*—skill in establishing specific, automatic responses quickly and permanently; drill.
33. *Skill in stimulating thought*—giving opportunity for and direction in reflective thinking.
34. *Skill in teaching how to study*—establishing economical and efficient habits of study.
35. *Skill in questioning*—character and distribution of questions; replies elicited.
36. *Choice of subject matter*—skill with which the teacher selects the material of instruction to suit the interests, abilities, and needs of the class.
37. *Organization of subject matter*—the lesson plan and the system in which the subject matter is presented.
39. *Skill in motivating work*—arousing interest and giving pupils proper incentives for work.
40. *Attention to individual needs*—teacher's care for individual differences, peculiarities, and difficulties.

V. *Results* include evidence of the success of the above conditions and skill.

41. *Attention and response of the class*—extent to which all of the class are interested in the essential part of the lesson and respond to the demands made on them.
42. *Growth of pupils in subject matter*—shown by pupils' ability to do work of advanced class and to meet more successfully whatever tests are made of their school work.
43. *General development of pupils*—increase in pupils' ability and power along lines other than those of subject matter.
44. *Stimulation of community*—effect on life of the community, tending to improve or stimulate its various activities.
45. *Moral influence*—extent to which the teacher raises the moral tone of the pupils or of the school.

Since school superintendents in the State of Indiana are required by law to issue over their own signature and deliver to the teachers under their supervision each year a statement of the success of each teacher, and such success grade shall be the teacher's legal success grade from one year from date of issuance, superintendents in that State use the rating system provided by the State law or a modifica-

tion of it. The following schedule of success items is in u
Elkhart:

SCHEDULE OF SUCCESS ITEMS.

I. Teaching Ability		35% ____
A. Professional attainment	(20%)	
1. Scholastic preparation.		
2. Professional training.		
B. The recitation	(15%)	
1. Preparation of teacher and pupils.		
2. Appropriateness of subject matter.		
3. Definiteness of aim and purpose.		
4. Skill in questioning.		
5. Progression in plan.		
6. Care in assignments of lessons.		
7. Balancing of lines of work.		
C. Results in scholarship of pupils	(20%)	
1. Acquisition of facts and relations.		
2. Accuracy.		
3. General information.		
4. Awakening of scholarly interests.		
5. Clearness and elegance of expression.		
II. Governing and Disciplinary Ability		30% ____
A. Moral and social influence on pupils and community	(10%)	
Ability to develop in the pupils the altruistic virtues—recognition of law and social rights.		
B. Ability to develop egoistic virtues—industry, honesty, reliability, fidelity, etc	(10%)	
C. Personality and appearance of teacher	(10%)	
Personal and moral worth and influence, habits, disposition, health, attire, sympathy, energy, manliness or womanliness, honesty, etc.		
III. Professional and Community Interest		15% ____
A. Cooperation with other teachers and with with supervisors	(5%)	
B. Interest in aims and plans of school community	(5%)	
1. Care of school property—		
a. Protection of supplies and furniture.		
b. Neatness.		
c. School decoration.		
2. Building up of strong school sentiment in the community.		
3. Educational, literary, or social club work.		
C. Professional pursuits	(5%)	
1. Present lines of professional study.		
2. Reading of educational literature.		
3. Attendance upon summer schools, institutes, and associations.		
Total	——	----% ____

The following is a schedule of success items provided by the superintendent of public instruction of Indiana according to the school law of that State:

	Per cent.
A. Teaching power	45
Many items enter into this, but the principal ones are training of teacher, preparation of lessons, skill in presentation, results obtained.	
B. Government	35
The teacher's power in government is shown in the general spirit of the school and in the attitude of the pupils toward their daily tasks, toward each other, and toward school property.	
C. General characteristics	20
Under this head the personality of the teacher, his community interests, and all those qualities that make for the best citizenship are considered.	

Salary schedules prepared by teachers.—Some superintendents, in conjunction with their teachers, have prepared salary schedules based upon merit. Such a schedule was prepared by a committee of teachers and the superintendent of schools of Columbus, Miss. Teachers are divided into the following classes:

Class A—Superior. A teacher whose work is exceptional. A teacher possessing unusual skill, resourcefulness, and power to stimulate pupils to achieve the best results the school seeks to accomplish.

Class B—Good. A teacher whose work is satisfactory and improving from year to year. A strong teacher.

Class C—Fair. A teacher showing little improvement from year to year. A teacher who has practically ceased to grow and whose service is doubtful, whose work is uneven and inconsistent. Work strong in some things and weak in others.

Class D—Unsatisfactory. A new teacher whose work is unsatisfactory but who gives promise of improvement and growth.

Class E—Inexperienced. A teacher who is entering the profession, or one whose experience is insignificant and unworthy of recognition.

Class F—Poor. A teacher whose service is poor and should be dismissed.

All teachers are classified by their principal in the following items:

1. *Personal qualifications.*—Health, voice, appearance, enthusiasm, etc.
2. *Professional ability.*—Knowledge of subject matter, knowledge of children, daily preparation, etc.
3. *School management.*—Discipline, system, attention to routine, etc.
4. *Teaching skill.*—School spirit of pupils and teacher, skill in conducting recitation, character of work of pupil, etc.
5. *Results.*—Knowledge gained, power to use knowledge, etc.

The school board of Evanston, Ill., made a decided departure from the usual method of formulating salary schedules when it suggested to the teachers that they appoint a committee of their own number to discuss, formulate, and recommend changes which, in their opinion should be made in the salary schedule of the teachers of that city. Acting on this suggestion the teachers in each building and the principals as a group selected one of their number to represent them on the committee. This resulted in a committee of nine, which held a number of conferences to discuss the various phases of the salary schedule. After every conference the arguments presented and the conclusions reached were reported by each member to the teachers they represented. The school board after making a few minor changes adopted the recommendations of the committee of teachers.

The committee recommended that a salary schedule should be based upon the following principles:

1. The salary of a teacher at the very least should be enough to provide a living wage. It should enable a teacher to do the reading and pursue such studies as are necessary to keep her in touch with the progressive movements in education in this and other countries. In addition it should permit her to save something each year to provide for the time when she must of necessity retire from active schoolroom service.

2. The maximum salary should be sufficient to retain the services of the most desirable teachers, as well as to induce teachers of highest quality to seek positions in the Evanston schools. It is safe to say that this community demands and is willing to pay for the best possible instruction and training for its children.

3. The administration of a salary schedule should result in stimulating teachers in the service to develop to the highest degree whatever teaching power they possess. Superior work should be recognized and rewarded. Teachers should be classified according to the quality of service rendered and not alone on the basis of their years of service.

4. The basis for classifying teachers as to their teaching efficiency should be systematized, rationalized, and controlled. There should be something definite to show upon what the judgment is based; evidence should be available to support the final rating. The factors on which a teacher is judged should be carefully selected so as to include the really vital elements. The terms used should be so clearly defined that the teacher will not be in doubt as to what is expected of her. It is of the highest importance that the items listed be understood by those who use them. Confusion and misunderstanding are inevitable if the supervisor rating and the teacher rating have a different interpretation of their meaning. The rating schedule should enable a teacher to analyze her own work, to discover her own strength and weakness, and to find out how best to remedy the defects in her teaching.

5. Salary increases should be based on the quality of service rendered as shown by the rating of the teacher's efficiency. In teaching as in other lines a "wage should be a gauge"—more pay should mean larger or finer service. Mediocre service should not be rewarded by increase in salary, lest all service, including the best, shall suffer from withdrawal of efficiency rewards. Increases of salary should be conditioned upon demonstrated increased classroom efficiency.

In applying the basic principles which it announced the Evanston teachers' committee urged that the board of education adopt (*a*) a plan for rating teachers according to the quality of the service which they render; (*b*) that as a result of the rating, definite classifications be established, and that these determine the pay of individual chers; (*c*) that a specified salary rate be adopted; and (*d*) that a ll-determined plan be adopted for the dismissal of the unfit.

The purpose of the rating plan, as outlined by the teachers, is—

. To determine the quality of teaching, as a basis for selecting) those who are deserving of promotion with increased salaries;) those who are to be retained without salary increases; and (*c*) se who should not be retained in service.

. To help teachers discover their own strength and weakness and remedy existing defects in their work.

The following tentative basis for rating teachers was recom-nded:

TENTATIVE BASIS FOR RATING TEACHERS.

Personal qualities:
  1. General appearance.
  2. Health.
  3. Voice.
  4. Tact.
  5. Intellectual capacity.
  6. Reliability
  7. Initiative.
  8. Self-control.
  9. Enthusiasm.
  10. Sincerity.

Social and professional ability:
  1. Preparation, academic, and professional.
  2. Professional interest and growth.
  3. Grasp of subject matter and daily preparation.
  4. Use of English.
  5. Understanding of and interest in children.
  6. Relation to associates and school life.
  7. Relation to parents and community.

School management:
  1. Character of discipline.
  2. Guarding physical welfare of children.
  3. Schoolroom housekeeping.
  4. Attention to routine.

Teaching technique:
  1. Factors affecting recitation:
    (*a*) Physical conditions.
    (*b*) Attitude of pupil to work.

IV. *Teaching technique*—Continued.
  1. Factors affecting recitation—Continued.
    (*c*) Attitude of pupil to teacher.
    (*d*) Attitude of teacher to pupil.
  2. Activities of the teacher:
    (*a*) Securing and retaining attention.
    (*b*) Selection and organization of subject matter.
    (*c*) Motivation.
    (*d*) Character of questions.
    (*e*) Character of illustrations.
    (*f*) Clearing up pupils' difficulties.
    (*g*) Attention to individual needs.
    (*h*) Capitalizing child's experience.
    (*i*) Stimulating initiative.
    (*j*) Courtesy to pupils.
  3. Activities of pupils:
    (*a*) Character of responses.
    (*b*) Organization of material—differentiating between essentials and nonessentials.
    (*c*) Independent thinking and self-reliance.
    (*d*) Cooperation with teachers and other pupils.

IV. *Teaching technique*—Continued.
  3. Activities of pupils—Contd.
    (*e*) Character and extent of questions by pupils.
    (*f*) Character and extent of field work.
  4. Assignment of lesson:
    (*a*) Definiteness and clearness.
    (*b*) Adequacy of preview.
    (*c*) Presentation of values.
    (*d*) Reasonableness and provision for exceptional pupils.

V. *Results:*
  1. Gain in subject matter.

V. *Results*—Continued.
  2. Power to use and ap knowledge gained.
  3. Powers of initiative and pe sistence.
  4. Powers of independent ju ment and reason.
  5. Attitude toward school.
  6. Habit of testing results.
  7. Skill in performance.
  8. Development of charact qualities.
  9. Development of social mind edness.
  10. Influence in community.

1. The scale of 1 to 10 is used for the sake of convenience to indicate the extent to which a quality exists. Such a marking is relative; it can not, of course, be considered an absolute measure. A mark of 10 in self-control, for example, does not mean 100 per cent or perfect self-control, but rather that the person so marked possesses self-control in an unusual degree, while a mark of 1, 2, or 3, would indicate the lack of it.

2. The qualities listed are not considered of equal value, neither does the scale show their relative value. It is obvious however, that some of these qualities should have vastly more consideration than others in determining the general rating of a teacher.

3. The general rating of a teacher therefore can not be found by adding up the numbers set opposite the different items. A teacher's general rating may be low, although she is marked very high in many of the items listed.

4. It is recognized that differing standards of excellence in the minds of different judges must result in differences in judgment. These standards so far as possible should be standardized and made objective. Standards can be established only through experience and long use of the scale, with such changes and modifications as are found to be needed.

5. In all cases it is a prime essential that a teacher shall be told and shown the basis for the rating in any particular, as well at the final general classification she is given.

All teachers at Evanston are to be clasified by the supervisors and finally by the superintendent into five groups, on the basis of the quality of service they have rendered. Five groups are suggested:

1. Those whose work is of so poor a quality that they should be dismissed from the service.

2. New teachers whose work has been unsatisfactory, but who show sufficient promise of growth and improvement to justify further trial. Frequently, it happens that a teacher who has done excellent work elsewhere finds it difficult within a year to adjust herself to new conditions, to new demands, and to standards which differ from those to which she has been accustomed.

3. Those who show little, if any, improvement over the work of previous years. The results obtained may be fairly satisfactory, but the fact that a teacher is reaching the point where she ceases to grow and improve, places her in the doubtful class. The work of a teacher in this group soon deteriorates and

her value is greatly reduced. Teachers whose work is uneven or not consistent—strong in some lines but weak in others which are essential, should be classified in this group.

4. Those who are strong teachers and do uniformly good work; who measure up well in all departments and show improvement from year to year.

5. Exceptional teachers whose work is superior; who possess unusual skill in teaching and show a large measure in initiative, resourcefulness and power in stimulating pupils to achieve the most worth while of the results the school seeks to accomplish.

It was recommended by the committee of teachers and adopted by the board of education that the minimum salary should be $75 and the maximum salary $1,500, and that increases should be granted as follows:

For teachers classified in—
- (*a*) Group 1—no increase; teacher dismissed.
- (*b*) Group 2—no increase; teacher retained for further trial.
- (*c*) Group 3—$25 increase.
- (*d*) Group 4—$50 increase.
- (*e*) Group 5—$75 increase, or more, the merits of each case to be considered and decided individually.

The initial salary for any teacher is based on the character of the teacher's academic and professional equipment, the quantity and quality of her previous experience, and the salary she has been able to command in her former position.

DUPLICATE SCHOOLS.

Sufficient data are not at hand to say whether there is any general movement in the smaller cities to adopt duplicate schools. Several superintendents report that they are experimenting with such school with good results. The duplication school at Monessen, Pa., may be given as an example of the possibilities of such schools. One of the eight-room buildings in that city has been converted into a duplicate school. To the original building of eight rooms there were added a gymnasium, auditorium, domestic science, manual training, art, music, nature study, and application rooms, and a community room and library.

The use of the eight regular classrooms and the eight special rooms during every part of the school day gives the pupil the advantages of special activities and special teachers without the disadvantages of extra room occupied only part of the time.

All the drawing is taught by one teacher in the art room, which is arranged especially for the work. All the music is taught by a special teacher in the music room. A teacher is in the gymnasium the entire school day, and the different classes go to the gymnasium for their physical exercises. While the boys of two classes are in the manual-training room, the girls of the same two classes are in

IV. *Teaching technique*—Continued.
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PROPOSED PROGRAM FOR THE IOWA BUILDING.

September, 1917.

	8.50–9.40	9.40–10.20	10.20–11.00	11.00–11.45
IB1.	Exp., M. W. F. Nat. S. App., Tu. Th.	Handwork.	Classroom.	
IB2.	Classroom.		Exp., M. W. F. Nat. S. App., Tu. Th.	Handwork.
IA1.	Exp., Tu. Th. Nat. S. App., M. W. F.	Handwork.	Classroom.	
IA2.	Classroom.		Exp., Tu. Th. Nat. S. App., M. W. F.	Handwork.
IIB.	Handwork.	Exp., M. W. F. Nat. S. App., Tu. Th.	Classroom.	
IIB. IIA.	Classroom.		Handwork.	Exp., M. W. F. Nat. S. App., Tu. Th.
IIA.	Handwork.	Exp., Tu. Th. Nat. S. App., M. W. F.	Classroom.	
IIIB.	Classroom.		Handwork.	Exp., Tu. Th. Nat. S. App., M. W. F.
IIIB. IIIA.	Art, Tu. Th. Phy. Ed., M. W. F.	Music, M. W. F. Lib., Tu. Th.	Classroom.	
IIIA.	Classroom.		Art, Tu. Th. Phys. Ed., M. W. F.	Music, M. W. F. Lib., Tu. Th.
IVB.	Art, M. W. F. Phys. Ed., Tu. Th.	Music, Tu. Th. Lib., M. W. F.	Classroom.	
IVA.	Classroom.		Art, M. W. F. Phys. Ed., Tu. Th.	Music, Tu. Th. Lib., M. W. F.
VB.	Music, M. W. F. Lib., Tu. Th.	Art, Tu. Th. Phys. Ed., M. W. F.	Classroom.	
VA.	Classroom.		Music, M. W. F. Lib., Tu. Th.	Art, Tu. Th. Phys. Ed., M. W. F.
VIB.	Music, Tu. Th. Lib., M. W. F.	Art, M. W. F. Phys. Ed., Tu. Th.	Classroom.	
VIB.	Classroom.		Music, Tu. Th. Lib., M. W. F.	Art, M. W. F. Phys. Ed., Tu. Th.

Noon intermission, 11.45–1.15. Boys may take art while girls are taking physical education. Girls may take art while boys are taking physical education.

PROPOSED PROGRAM FOR THE IOWA BUILDING—Continued.

	1.15–1.55	1.55–2.35	2.35–3.15	3.15–3.55
IB1.	Art, Tu. Th. Phys. Ed., M. W. F.	Music, M. W. F. Lib., Tu. Th.	Classroom.	
IB2.	Classroom.		Art, Tu. Th. Phys. Ed., M. W. F.	Music, M. W. F. Lib., Tu. Th.
IA1.	Art, M. W. F. Phys. Ed., Tu. Th.	Music, Tu. Th. Lib., M. W. F.	Classroom.	
IA2.	Classroom.		Art, M. W. F. Phys. Ed., Tu. Th.	Music, Tu. Th. Lib., M. W. F.
IIB.	Music, M. W. F. Lib., Tu. Th.	Art, Tu. Th. Phys. Ed., M. W. F.	Classroom.	
IIB. IIA.	Classroom.		Music, M. W. F. Lib., Tu. Th.	Art, Tu. Th. Phys. Ed., M. W. F.
IIA.	Music, Tu. Th. Lib., M. W. F.	Art, M. W. F. Phys. Ed., Tu. Th.	Classroom.	
IIIB.	Classroom.		Music, Tu. Th. Lib., M. W. F.	Art, M. W. F. Phys. Ed., Tu. Th.
IIIB. IIIA.	Exp., M. W. F. Nat. S. App., Tu. Th.	Handwork.	Classroom.	
IIIA.	Classroom.		Exp., M. W. F. Nat. S. App., Tu. Th.	Handwork.
IVB.	Exp., Tu. Th. Nat. S. App., M. W. F.	Handwork.	Classroom.	
IVA.	Classroom.		Exp., Tu. Th. Nat. S. App., M. W. F.	Handwork.
VB.	Handwork.	Exp., M. W. F. Nat. S. App., Tu. Th.	Classroom.	
VA.	Classroom.		Handwork.	Exp., M. W. F. Nat. S. App., Tu. Th.
VIB.	Handwork.	Exp., Tu. Th. Nat. S. App., M. W. F.	Classroom.	
VIB.	Classroom.		Handwork.	Exp., Tu. Th. Nat. S. App., M. W. F.

In grade 5, for example, the 5A pupils are in the regular classroom from 8.50 to 10.20, and during the period from 10.20 to 11.45 they are in one or more of the special rooms. During the period 8.50 to 10.20 the 5B pupils are in one or more of the special rooms, and during the period 10.20 to 11.45 they are in the regular classroom.

The superintendent of schools at Monessen summarizes the advantage of the duplicate school as follows:

> It furnishes special teachers for special subjects, like music, drawing, physical culture, domestic science, and manual training.
>
> It provides these special activities at a less cost by having all rooms occupied at all times.
>
> It provides library and reading facilities that we can not have in another school.
>
> It provides better for the exercise of the pupils' natural activities.
>
> In the application room and the handwork rooms the pupil has an opportunity to put into practice his arithmetic, and in the expression room or story-telling and dramatizing room he has an opportunity for practical oral English.
>
> Our experience so far shows that the children prefer to go to this school.

SUPERVISED STUDY.

A few years ago the attention of teachers was called to the fact that many children fail because they do not know how to study. Not a few superintendents have, within the past few years, rearranged the daily program in both the elementary and the high school so that teachers may have an opportunity to supervise the study of pupils. Supervised study may no longer be considered an experiment. The interest in it has become such that several books and numerous magazine articles have been written on the subject. Teachers' associations and institutes have taken it up as one of the vital problems in school management.

The purpose of supervised study is to shift the emphasis from the recitation period to the study period and to give more attention to methods of study and less attention to testing the pupils to find out how much they remember of the text. A recitation of 10 minutes after 30 minutes of supervised study is no doubt better than a recitation of 30 minutes after 10 minutes of study, the amount of time some pupils give to the studying of a lesson. Since good habits of study are more desirable than the mere accumulation of facts, one of the important functions of the teacher is to teach children how to study.

The results of supervised study have been reported as good. The superintendent of schools at Foxcroft, Me., who made trial of this method in the elementary grades, reports:

> Many of the supposedly dull pupils manifested unusual ability after a short time, due to the confidence caused by class discussion and better methods of study. Nonpromotions were diminished, and a better standard of work was obtained in both divisions. The dull pupils were not outstripped in coming to conclusions by the bright ones; neither did the quicker pupils have to wait for explanations that were needless to them. At the end of the year the class came nearer to being all on the same level than they could possibly have been with all pupils in the same group.

The superintendent of schools at Madison, Ind., who has introduced supervised study into his schools, has distributed to the pupils the following suggestions as to methods of study which should prove helpful, especially if the teacher encourages and assists her pupils to follow the suggestions:

SUGGESTIONS.

1. Make out a regular study program at the beginning of the term for both school and home study. A regular study program saves time, prevents idleness, presents a definite task for each period of the day, assures preparation of each lesson, shows the necessity for home study, and tends to create habits of regularity along all lines.
2. If possible arrange to study a subject immediately following the recitation in the subject.
3. Follow your study program regularly every day. Never make an exception to this rule.
4. Begin to work at the beginning of the period. Do not waste time.
5. Provide yourself with the material the study of the lesson requires at the beginning of the study period.
6. Begin by reviewing the chief points in the last recitation in the subject to be studied.
7. Study the assignment. Be sure you understand it and know what you are expected to do.
8. Concentrate on the work to be done. Do not let other things attract your attention. When you study make a serious business of it. Do not dilly dally.
9. Read the lesson through as a whole and get the general idea.
10. Study each paragraph, topic, or problem in detail. Understand it before going to the next.
11. Make use of the dictionary, reference books, maps, and all aids available.
12. Stop frequently and think over what you have read. Relate the new ideas to old ideas of a like nature.
13. Make a brief written outline of the chief points. Close the book and think through the lesson following the outline.
14. Review often. Memorize important data.

THE WAR AND THE SMALL-CITY SCHOOLS.

Schools in the smaller cities have been influenced by the war in practically the same way as those in the larger cities. The former as a result of the war have in some respects suffered more and in other respects they have made more advancement relatively than the latter. In the small city there has been a greater shortage of teachers, owing to the fact that salaries in most of these cities are much less than in the larger cities. The selective draft called more men from the schools of the small cities than from the large, since most of the male teachers in these schools are within the draft age. In some respects the small-city schools have made more progress relatively than the large-city schools. Prior to the war not a few of the former confined their attention chiefly to the academic subjects. Now most them have introduced industrial, home economic, and commercial courses. Many have organized night schools for adults and especially for the foreign-born adult.

The war has modified the course of study by relating it more intimately to actual conditions. Schoolmen realized that the teaching f the war should not be deferred until after the historian has aranged the events in chronological order and has sifted and interpreted the facts. Practically every school in the smaller cities has been teaching the causes of the war. Many schools have followed he movements of the armies from day to day by means of bulletin boards. Discussions in connection with lessons in history, geography, English composition, and literature have been common. Incidental instruction regarding the war can and should be provided hrough the opportunities offered by the regular school subjects. It has been found that a good time to impress the causes and events of the war upon the minds of the children is when Liberty Loans are being floated and when subscriptions for the Red Cross are being solicited. However, if definite results are to be obtained, instruction regarding the war must be more than incidental, incidental instruction in school subjects having proved a failure. There must be systematic instruction, there must be some aim, and not the teaching of a few unrelated facts here and there, and now and then, in connection with the other school subjects.

Some schools have made a systematic study of the war by means of an outline prepared under the direction of the superintendent. Such an outline prepared by the superintendent and teachers at Fargo, N. Dak., may be given as an illustration of what it is possible for a school to do to make a systematic study of the war. The outline was prepared to suit the different grades. The outline for the sixth grade is given herewith:

OUTLINE OF WAR STUDY AT FARGO, N. DAK.

I. The Army.
    1. Regular.
    2. National Guard.
    3. National Army (first call).
II. The geography of the warring nations.
III. Social and political conditions among the warring nations.
    1. Suffrage.
    2. Condition of—
        (*a*) Poorer classes. Day laborers; wages.
        (*b*) Middle classes.
        (*c*) Upper classes.
    3. Class distinctions.
    4. Opportunities for the common people.
    5. Position of women.

III. Social and political conditions among the warring nations—Continued.
  6. Government.
  7. Compare with the United States.
  8. Immigration to the United States. Why?
IV. Military organizations of—
  1. Germany.
  2. Austria.
  3. Russia.
  4. Italy.
  5. France.
  6. England.
  7. United States.
V. The Hague Tribunal.
  1. Its history.
  2. Attempts at arbitration.
  3. Attempts at disarmament.
VI. The Monroe Doctrine. Attitude of Germany toward it.
VII. The war.
  Why we are in the war.
    (*a*) Invasion of Belgium.
    (*b*) Sinking of the *Lusitania;* President's message.
    (*c*) Sinking of the *Sussex;* President's message.
    (*d*) Submarine warfare.
    (*e*) Making the world safe for democracy.
VIII. The naval battle of Heligoland, illustrating use of dreadnaughts, battle cruisers, torpedo-boat destroyers, torpedo boats, and submarines.
IX. Movement for peace.
  1. The Hague Tribunal. The work of Carnegie.
  2. Czar of Russia and his disarmament proposition.
  3. Treaties made upon the advice of Mr. Bryan.
X. The Red Cross.
  1. Its history.
  2. Its purpose.
  3. Tell the story of Florence Nightingale. Read the poem to her by Longfellow.
XI. Y. M. C. A. Its purpose in relation to the war.
XII. Conservation.
  Elimination of waste:
    (*a*) Clean plate and empty garbage can.
    (*b*) Quit feeding useless pets.
    (*c*) Getting full value for money.
    (*d*) Government fixing prices.
XIII. Tell how the different countries finance the war.

The war has modified the method of teaching many of the school subjects. The teaching of English composition has been vitalized through the discussion of topics relating to the war. Compositions based upon some event of the war have taken the place of those on topics in which the pupil had no, or at least only a remote, interest. One of the most powerful means of vitalizing instruction in English has been the Junior Four Minute Men talks. New meaning has been given to history and geography by teaching about present-day hapenings and the work the world is now doing. In the manual trainng shop and in the home economics rooms a motive now prevails, while heretofore the pupils in many schools in the smaller cities did "exercises" in manual training and in cooking and sewing. Now they are making things in the manual training shop that have a real use. Sewing is for some purpose, making material for the Red Cross; cooking has been put on a more rational basis, the children being taught food values and food conservation. The art teacher has likewise vitalized her work. Instead of mere exercises, she has had her pupils make posters for Liberty Loan, War Saving Stamp, and Red Cross campaigns. There is scarcely a school subject that has not been made more alive by relating it to actual conditions. The principle that school work should be related to life has long been advocated and but little practiced. The war has been a means of relating school work to life.

Before the war the smaller city schools as a rule gave but little attention to home gardening under the direction of the schools. A few were, however, experimenting with this kind of school work. In almost a day practically every small city school system became interested in gardening under the direction of a supervisor. Many teachers have volunteered their services during the summer months. In some places the supervisors are employed by the school board. This is the better plan. In a very small city the principal of schools could well devote part of his time to the supervision of home gardening. In other cities the instructor of science or teachers especially interested in nature study should be employed for the entire year, so that during the summer months they may supervise the garden work.

Most of the small-city schools report that they have dropped German from the high-school course of study. In those schools in which German has been the only modern foreign language offered, French or Spanish has been substituted. Owing to our close relations with the French people and our interest in them, the teacher of the French language now has an opportunity to vitalize the subject which she has never had before. Many children will be interested in learning the language so that they may write letters in French to their brothers or friends now in France, and they will be interested in learning to speak the language so that they may converse in French with those returning from France. These motives, it is true, are not the real ones for studying the language, but they are so near that the teacher can not afford to neglect them.

Within the last few years physical training has received a powerful impulse. Of the schools reporting, practically all have taken steps toward the better care of the child's health. Some have introduced military training, others have introduced systematic physi education. Many have employed a school physician or nurse, o both. Greater advancement has been made in the schools of th States of New York and New Jersey than elsewhere, owing to the fa that the State law in each of these States requires physical training as a part of the course of study. As good results may be expected in the other States that require physical training. In those States where no such law has been enacted the more progressive cities have made physical training a part of the school work. Since such training has been found to be necessary, the State should require it of every school and not leave its adoption to local initiative, because some cities never will have initiative enough to introduce a course in physical training. It is sound theory that the State should require every school to teach those subjects that are of most value to the individual and to the State and not leave the introduction of vitally important subjects to the whims of a local community. Every State requires that reading, writing, and arithmetic be taught, these being considered the "tools," and that it is necessary for every one to have a thorough mastery of them, so that they may have the means of becoming intelligent citizens. Every State should require physical training of every child so that he may become an efficient citizen. Not until this is done will small city schools introduce systematic physical training, though the war has made the need of such training apparent.

Thus we might continue to enumerate the influence of the war upon the schools. In brief, every school in the smaller cities has engaged in some kind of war work. In some of these the schools have undertaken to do everything that was suggested—Red Cross work, selling Liberty Bonds and Thrift Stamps, demonstration lessons in food conservation, gardening, etc. Through the school children much of the information regarding the war, food conservation, etc., has been disseminated.

Though the war has entered the schools, school men have not been unmindful of the fact that a state of war is unnatural and that the fundamental studies ought not to be crowded out by war activities. Superintendents and teachers have, however, found that they can vitalize the regular school subjects by introducing the war into the schools. They have found that the war offers an opportunity to train children in the service of the State. It is true that in peace time opportunity exists for the same kind of training, but the immediate need is not so keenly felt.

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KINDERGARTEN EDUCATION

By

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KINDERGARTEN EDUCATION.

By Almira M. Winchester,

Specialist in Kindergarten Education, Bureau of Education.

CONTENTS.—I. The kindergarten and the war.—II. Kindergarten practice.—III. Survey of the kindergarten of Richmond, Ind.—IV. Recent publications pertaining to the education of young children.—V. Kindergarten legislation.

I. THE KINDERGARTEN AND THE WAR.

With war in the world turning everything topsy-turvy, institutions and existing social conventions, formerly taken for granted, are now subjected to rigid inspection and their meanings sifted, in order that nothing useless may be permitted to cumber the earth when every bit of time, space, labor, money, and thought is imperatively demanded for carrying on the world business.

Side by side with the process of excluding the useless is going forward the process of uncovering the essentials in human institutions and making them yield up their wealth of possibilities. Education has thus been discovered. The school, as one of the chief instrumentalities of education, has begun to come into its own. Moreover, since babies are assuming a new value in the whole scheme of democracy, the kindergarten in its relation to the school and to the home is regarded afresh with respect and expectation.

The kindergarten unit for the refugee children of France.—One very direct form of war service is that being provided by the kindergartens of America for the task of restoring to normality the little children living in the refugee colonies of France.

The service undertaken by the American branch of the International Kindergarten Union is that of equipping and supporting a kindergarten unit in conjunction with the children's bureau of the American Red Cross in France, to work under the auspices of the citizens' committee for the conservation of the children of America during the war. Miss Fanniebelle Curtis is director and Miss Mary Moore Orr associate director of the unit.

Miss Curtis and Miss Orr, after visiting the devastated regions of France, returned with the strong conviction that it is trained kindergartners who are needed to relieve the misery of the children and to give back to them some of the joys of normal childhood through plays, games, stories, handwork, and other educational activities.

The pitiful condition of the little ones is described by Miss Curtis in an appeal addressed to the members of the International Kindergarten Union. Subjected to the horrors of bombardments and gas, bewildered and benumbed by the necessity for silence in the presence of the frightful boches, undernourished, apathetic through suffering so many terrors, these unfortunate children are in danger of losing their sanity unless something immediate is done for their restoration. In Miss Curtis's own words:

> They have been in the gassed regions, they have been lost on the fields of Flanders, they have fled from their burning villages, they have been actual prisoners with the civilian population back of the enemies' lines.

The Germans are sending back from the prison camps thousands of civilians, keeping them in Switzerland for a certain time and then allowing them to return to France. At Eviansles-Bains, the distributing point, child refugees are coming in at the rate of 500 a day. Miss Curtis declares:

> It is a tragedy that has no parallel in the world's history. The children are being placed in colonies, in chateaus, in convents, in convalescent hospitals until victory with honor is won. They need songs and stories and the joys of childhood restored, and more than all they need mothering.
>
> Every foreign mail brings more pitiful stories. It is childhood's darkest hour.

The kindergartners of America have raised over $35,000 to defray the expenses of equipping and sending kindergarten teachers to France. A number of teachers have already sailed, and others will follow as soon as funds for the purpose can be raised.

Conservation of the children of America.—To conserve the well-being of American children is properly regarded as a form of war service. The campaign, organized by the Children's Bureau of the Department of Labor, for saving the lives and bettering the health of 100,000 babies during the current year, has been earnestly supported by parents and teachers. Kindergarten teachers have made it their business to assist in the work of weighing and measuring young children, and recording the facts brought out by the physical examinations. In some instances follow-up measures are being instituted in order that immediate results may be secured for the kindergartens. This is the case in Worcester, Mass., where the supervisor of kindergartens issued to the teachers the following instructions:

> While the baby measuring and weighing records are available in your school building, will you please make a list of the names of all children in your school district who will be of kindergarten age this coming school year? Send

> to me the number—figures only—you discover. I will then take some steps to help you bring those children in promptly in September, 1918.
>
> This will be an effort to avoid the dropping-in-at-any-time that so pulls down our kindergarten organization and work.

Another form of service in which kindergartens have engaged during the past 15 months is that of cooperating with those social agencies, in their respective communities. whose concern is with child welfare. To provide wholesome kinds of interest and activity in connection with the social side of child life, and thus to protect childhood from some of the blighting influences of war conditions, kindergarten teachers are spending their nonteaching hours in telling stories to groups of children, supervising some of the play in the small parks and public playgrounds, directing children in the cultivation of back-yard gardens, organizing excursions to woods or parks convenient to the neighborhood, and other similar activities. Nor are the teachers unmindful of their responsibility for seeing to it that children are gathered in and kept in school nor of their further responsibilities toward the mothers, especially in regard to instruction in hygiene, care and wise purchasing of food, and more efficient ways of living.

Kindergarten practice itself is influenced through the new insight, for teachers realize as never before the significance of the laws which govern all right association of individuals. Self-activity must always be the guiding principle of the kindergarten, but the individual is to be developed as a member of a group; as such he must conform to, must obey the laws which rule the whole, and subordinate self-gratification to the good of the whole. Since the children who fail to learn this lesson early in life become weaklings, self-seeking individuals, and moral failures, kindergarten teachers are more consciously than before directing the children in exercises which call for instant response in concerted action, and for conformity to the desire of the group; also in organized plays which demand self-subordination and teamwork, and which make for helpful, self-controlled children.

The kindergarten as a factor in Americanization.—It is no new thing for the kindergarten to provide some of the means for transforming aliens into Americans. A permanent argument for kindergarten extension is that the children of the foreign born by means of kindergarten training are familiarized with English before formal school work sets in, and time is thus saved for the grade work. Furthermore, home visiting and holding mothers' meetings have been part of the kindergarten teachers' business and have been a factor in bringing the foreign family into an understanding and appreciation of the customs and standards of the new country.

The unique element in the relation of the kindergartner to the foreign family is that she reaches the members in a normal way before their home life has been disturbed. When the district nurse or the social worker comes to the family, it is at a time when economic pressure or sickness has forced them to the position of want, in which they are discovered.

In recent years the development of parent-teacher associations has tended to absorb the kindergarten mothers' meeting into the larger body, and the practice in public-school kindergartens of requiring kindergarten teachers to teach in the classroom both morning and afternoon has rendered it difficult for the teachers to visit in the homes as they used to do. The timid, non-English-speaking woman, conscious of being different from her neighbors, has been reluctant to attend the larger, more formal school meeting, and has thus missed the participation in community affairs and the opportunity for learning the language which her children are using in their daily school life and which her husband has acquired through the night school, the shop school, or the lodge school.

One result of this situation is that the mother, the center of the household, is neglected and often looked down upon by husband and children, who have outstripped her in the acquisition of the tools of citizenship. As the distance between them increases she grows apathetic, antagonistic, and reluctant to rouse herself to learn the language and customs which would help to bridge the distance. This is the opportunity for the kindergartner. Efforts are now being directed toward the establishment of more kindergartens, especially in regions where large numbers of aliens are employed in necessary industries, since the barrier of noncommunication can thus be removed while the children are young and unconscious of any difference between themselves and their American neighbors; and toward the restoration to its former place and function of the kindergarten mothers' meeting, and the development of the " door-step " meetings, since in them can be found the machinery for a fine give-and-take relationship between old Americans and more recent Americans.

Kindergartens in Ordnance schools on Government reservations.—Government reservations for industrial plants are necessary accompaniments of the present emergency and are being developed under the direction of the industrial-service section of the Ordnance Department. Wherever the needs of the workers and their families require it a new town is being created, with suitable houses, school buildings, church buildings, Y. M. C. A. buildings, and other facilities for wholesome, clean, social living. As an integral part of the school system kindergartens are being provided, and teachers are sought who possess qualities essential to successful community cooperation. Cottages or teacherages are being built for the housing of the teachers. Each school has one room planned purposely for a kindergarten, and the equipment and supplies are to be excellent in quality.

These reservation kindergartens offer to the teachers chosen to direct them rich opportunity for the best kind of patriotic service. Comparatively few kindergartners can go abroad at present for service in France, but here in America is an opportunity to do a vital and far-reaching piece of work. Not only the school population is to be educated, but the entire community as well. There will be playgrounds and other forms of recreational activity which the kindergarten teachers will be peculiarly fitted to direct.

Schools for the colored children, as well as for the white, will be established on the reservations near Charleston, W. Va.; Nashville, Tenn.; and Sheffield, Ala.

Retaining the name "kindergarten."—It was to be expected that some discussion on the rejection or retention of the name kindergarten would follow the entrance of the United States into war with Germany. That the institution itself has become thoroughly naturalized there can be no doubt. No other phase of education is more completely democratic and American than the kindergarten. In this respect the prophecy of the founder has been fulfilled that in America, the new world where new life was and is unfolding, the new education of the human race would take firm root. In Germany, the geographical birthplace of the kindergarten, little more than the outer form and the name is discoverable; the essence is missing. The kindergarten is not at home in Germany.

The edict of the Prussian Government in 1851 forbidding the establishment of kindergartens is tacit evidence that a system of education for the people based upon the principle of self-activity, freedom, and respect for individuality was considered a dangerous foe to the success of military autocracy. It was charged at the time that the tendency of the kindergartens was toward atheism and revolution, an indictment that inspired the Berlin comic paper to point out as objects of suspicion "those three-year-old demagogues with their inflammatory speeches, those red-handed revolutionists in swaddling clothes."

The contention of those who desire to change the name kindergarten is that, since the institution is truly Americanized, the name should undergo the same process; also that the new name should bear in it the suggestion of organic relation with the school system. But the clumsiness and ineptitude of the substitutes which have been suggested make it difficult to believe that any of them will be adopted.

"Children garden" or "child garden," the literal equivalent in English for kindergarten, is acceptable in so far as it retains the description of the institution; but the sound of it is awkward and disagreeable to the ear.

"Subprimary" is a term which has been offered, and in a few systems adopted, because it is said to carry out the idea of a real connection between the kindergarten and the rest of the school organization. The objection to it lies in its failure to define the essence of the kindergarten; "sub" makes the institution a mere annex to the primary grades and expresses only an external relation.

"Primary circle" has been suggested on the ground that the present name emphasizes the aloofness of the kindergarten department from the school as a whole, whereas primary circle is expressive of the truth that the aims, principles, and ideals of the kindergarten are basic of what is to follow in child training. The reason is good, but the name offered is not a success. In school vernacular "primary" is limited in its meaning, and has become synonymous with first grades; primary circle, therefore, being narrowly interpreted, would cause the institution to be regarded as a side issue externally related to the first grade.

"Baby nest" is the designation chosen in place of kindergarten in Italy. The description of the baby nests given by Signorina Amy Bernardy at the Pittsburgh meeting of the National Education Association leads to the conviction that, according to the American understanding of things, these institutions would be classed as day nurseries.

A passing observation should be given to the terms "school of childhood" and "house of childhood." The former name was selected to designate the department for the youngest children in the school of education of the University of Pittsburgh. The projectors of the school wished to be free from the limitations which would naturally be imposed upon the experiment if it bore the name kindergarten, and from having judgments passed upon the work according to kindergarten standards. The "house of childhood" is the name selected by Dr. Montessori to describe the type of educational institution devised by her. The classes were originally established within the tenement houses erected by an association for good building in Rome, and were intended to provide for the early training of the children of the workmen housed in the tenements.

Among the members of the International Kindergarten Union it is generally felt that "kindergarten" should remain. No other word so aptly and euphoniously describes the thing signified, an organization in which each individual child is regarded as a living organism or plant whose inner nature is capable of unfolding its richness in response to a favorable environment and under the gardener's care.

II. KINDERGARTEN PRACTICE.

Turning from the name to the institution itself, it is evident that modification in practice is steadily proceeding. Aside from the oft-cited illumination coming from "the light of modern psychology and child-study," several factors are contributing to bring about change of methods as well as of materials. Among these are:

(1) The need for giving to primary teachers and supervisors a clear exposition of kindergarten principles and methods.

(2) The new faith in democracy, expressing itself educationally in new faith in children's ability to direct their own activities and to organize their own groups.

(3) The friendly attitude toward experimentation with methods and materials, coupled with the "newly acquired devotion to the checking of results."

(4) The increasing number of kindergarten teachers who each year study education in colleges and universities.

Testing and measuring progress of kindergarten children.—Until recently it has been urged that the difficulties in the way of securing a satisfactory measure of the results of kindergarten training are insurmountable, and that the best things that happen to children because of a year or so in kindergarten can not possibly be reduced to terms of objective measurement. In answer to this, Dr. W. C. Bagley, in his introduction to The Kindergarten in Japan,[1] points out that, while the ultimate effects of certain educational doctrines may be difficult to predict and the immediate effects difficult to determine and evaluate, "these are assumptions neither to be made lightly nor to be used as a cloak for mental inertia. The very difficulty should rather be a spur to the devising of means toward accurate prediction, exact measurement, and just evaluation."

In response to the spur prick, a beginning has been made during the past year of a valuable type of work. Under the leadership of Miss Alma L. Binzel, of Minneapolis, who devised a tentative set of tests of children's abilities, a group of experienced kindergartners undertook to give the tests and record the results after a uniform manner. Certain typical kindergarten activities were selected, appropriate tests for their measurement were determined, and groups of children were tested at the beginning and again toward the end of the school year. The progress in ability was recorded on a card devised for the purpose, and a summing up of the findings was made by Miss Binzel.

The activities selected for the project were those expressive of the following forms of ability: Physical control; language, as to range of vocabulary and ability in oral composition; musical expression and recognition; constructive ability as shown in both temporary and permanent constructions; skill in graphic presentation; scientific aptitude as indicated by identifying objects, answering questions as to use and source of materials and as to processes; and mathematical aptitude as shown by using number, counting, and recognizing number groups.

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[1] The Kindergarten in Japan, by Tsunekichi Mizuno.

It was the opinion of Miss Binzel that, in spite of handicaps, the results of the preliminary testing justify the continuance and expansion of the work; that in due course of time it will be possible to arrange scales of kindergarten work just as spelling, handwriting, arithmetic, and composition scales have been devised for grade work; that ultimately, norms will come into existence that will be valid in the measurement of progress due to kindergarten education; and that while growth in certain qualities of character does not readily lend itself to quantitative expression, it is legitimate to draw inferences as to developing personality from the scientific data furnished by the tests.

Waste between the kindergarten and the primary school.—Progress has been made in the study undertaken by the committee on minimum essentials in kindergarten and primary grades of the subject of what and how much of the kindergarten's contributions to the child's development are utilized in his subsequent school years. The report[1] made by the committee chairman, Miss Annie Moore, treats of investigations made in the field of arithmetical concepts, of literature, and of the use of free oral expression in first grade.

A series of tests in fundamental arithmetical concepts was used to measure the abilities of kindergarten and nonkindergarten children in order to ascertain whether children entering first grade after a year of kindegarten training are stronger in arithmetical concepts than children with no kindergarten training; also, if there is a difference in ability to learn, whether it is due to difference in age. The tests were applied once at the beginning of the term for initial ability, and again at the close for amount of improvement.

The score showed that the kindergarten children made a higher record of *points* in both tests. The *rate* of improvement was about the same in both kindergarten and nonkindergarten children. The *time* required by the nonkindergarten group was less in the first test; in the second test the time required was the same for both groups. In regard to age, the results indicated that the kindergarten pupils, even though slightly younger than the nonkindergarten pupils, made higher scores in points.

A comparative study of the literature used in kindergartens and first grades was made in order to determine the amount of duplication occurring and the degree of progression secured in the subject. The results of the study show, among other features, that kindergarten and first-grade teachers are quite at one in regard to the use of nursery rhymes; that in the selection of literature, first-grade teachers in general choose whatever gives the best material for teaching reading, thus subordinating literary values to the technique of teaching beginning reading; and that in some instances kindergarten teachers send forward to the first-grade teachers a list of stories that have been used in the kindergarten.

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[1] Proceedings of the International Kindergarten Union, 1917.

The study of the use of free oral expression in the first grade was based upon the principle involved in the fact that "normal children make remarkable progress in the mastery of their mother tongue during the preschool period, and that this mastery is attained through the abundant and free use of speech in purposeful and significant ways." Increased language ability among kindergarten trained children is a recognized result, due to the freedom permitted in the kindergarten and the encouragement of conversation about objects and experiences of immediate and personal interest. Similar opportunities for free, natural, oral expression are advocated for primary grades by numbers of schoolmen; but that theory is ahead of practice in this respect is made apparent by the results of the study; for the tendency is clearly toward silence on the part of the children in primary grades, a condition which prohibits their learning how to use English fluently, intelligently, and correctly, as far as school experience is concerned.

The course of study in the kindergarten.—For the purpose of furthering the better understanding of kindergarten aims and methods by primary teachers and supervisors and providing constructive suggestions for the many kindergarten teachers who have to work without a supervisor's assistance, a group of kindergartners has undertaken to formulate the kindergarten curriculum and the standards involved therein. The need for a sane presentation of a sane curriculum in published form is emphasized by the fact that strange, extravagant practices are being introduced here and there under the name of "experimentation." Clear ideas as to essentials are evidently necessary to enable the "experimentors" to discriminate between freakish novelty and that which is validly original.

In preparing their formulation the committee of kindergartners have treated the curriculum in its twofold aspect of content or subject matter and forms of expression or activities. The terms "oral expression," "manual activities," "drawing," "physical training," "nature study," and "music" have been adopted so as to be in accordance with the usage in formulations of primary-grade curricula.

The various divisions of the subject are discussed as to: Aims, general and specific; subject matter; methods; attainments. In the section devoted to language, wrong as well as right methods are illustrated in order to throw into relief some faults commonly committed.[1]

Results of experiments with self-organized groups.—As evidence of the new faith in children's ability to initiate and direct their own play and work activities, various forms of experimentation are in progress. Those in charge of these experiments undertook the work firmly believing that self-activity means what it says; that the spontaneous play of children is educative; that children are rich in purposes at present and are not merely potentialities; that they should live in the present up to the best of their ability; that they should be measured by their intelligent cooperation, their ability to initiate and control situations, and their power of self-control; that in groups organized by the teacher the leadership is one-sided, the adjustments are made by the teacher, the plans and problems are set by her, and opportunities for experimentation or invention are meager.

While no scientific report on the experiments is as yet forthcoming, some conclusions appear in a report presented at the International Kindergarten Union convention (1917), by Miss Faye Henley. Miss Henley points out that a "spontaneous group" is a free organization in regard to numbers. Sometimes one child will work alone; sometimes groups of two or three will work together; and sometimes the entire group is included. An "organized group" is one organized by the teacher and held together by her.

The conclusions reached so far are:

(1) That the spontaneous or self-organized group provides for the practice of democratic principles; that the children make their own social adjustments and find opportunity for leadership, initiative, and experiment.

(2) That the limitations in self-organized group work are that some children merely repeat what pleases them, without progressing; some children do what is easiest for them; some become capricious and even lawless.

(3) The place of the teacher in the organization thus becomes clear. She must keep the balance, help to improve standards, be ready to give expert advice, stimulate lagging interest by bringing in new aims or new use of materials.

III. SURVEY OF THE KINDERGARTENS OF RICHMOND, IND.

Of recent years a number of surveys have been made of the school systems of various cities, and the kindergartens, being included, have come in for their share of comment; but to the kindergartens

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[1] The report will be published shortly as a bulletin of the Bureau of Education.

Of Richmond, Ind., belongs the distinction of being surveyed as a system of kindergartens, and by a kindergartner, Miss Alice Temple, of the school of education of the University of Chicago.

The survey was undertaken with a view to achieving a closer co-ordination between the kindergartens and the grades. The report[1] is a most valuable document containing excellent suggestions for groups of kindergartners who may wish to conduct a survey of their own kindergartens.

In carrying on the investigation Miss Temple visited each of the eight kindergartens twice, and visited the first-grade classes; held conferences with the teachers both as groups and as individuals; examined the course of study for kindergartens printed in the superintendent's report for 1912; studied information supplied by the superintendent; and examined the written answers to questions contributed by kindergarten teachers and first-grade teachers.

The report is organized under the following sections: The kindergartens; the room equipment; the teachers; the relation between the kindergarten and the first grade; and the curriculum and methods of the kindergarten.

In regard to the kindergartens, Miss Temple found the prevailing social atmosphere wholesome and the relations between children and teachers all that could be desired; but in some of the classes the children have been trained to respond automatically to a series of piano signals and to certain artificial devices for securing attention. This method tends to produce dependence upon particular forms of guidance rather than intelligent self-control.

Commenting upon the room equipment, the report recommends more growing plants and some form of animal life. Of the materials for play and handwork, the criticism is that they are inadequate. The kindergartens are supplied with the "traditional" materials. It is recommended that larger blocks, together with boards of varying lengths, be added to the equipment, in order that the children may make buildings and furniture for their own play use. A "kinderhaus" or five-fold screen to inclose a space for a playhouse is also recommended.

According to present-day theory, materials are primarily valued as means through which children may give expression to their ideas and carry out their play purposes. This means that any of the traditional materials may be discarded and more adequate ones used. Among these more adequate supplies are large-sized and heavy papers for construction work; soft wood cut in blocks and boards, together with hammers and nails for construction; easily handled textile materials for weaving; and materials for simple and crude dolls' clothes.

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[1] Supplementary educational monograph of the School Review and Elementary School Journal, Vol. I, No. 6.

Small toy animals, small dolls, toy utensils, and dishes to use in connection with building plays are recommended.

In respect to the teachers and their needs, it is recommended that a well-trained and thoroughly efficient supervisor of kindergartens and primary grades be secured; that the kindergartners be encouraged to attend summer sessions and pursue further study in kindergarten education; and that a more profitable use be made of the afternoon hours of the kindergartners. It is pointed out that the constructive movement within the kindergarten during the past 10 or 15 years has made rapid progress, and that kindergartners should put themselves in the way of further study at one of the progressive normal schools or universities in order to keep pace with the best developments in kindergarten practice.

The need for the continuity between the work of the kindergarten and that of the first grade is apparent. It is suggested that the teachers and supervisors work out a kindergarten-primary curriculum which shall provide for continuity in each of the subjects common to both: Community life, industrial and fine arts, language, music, physical education, nature study, number work.

A number of first-grade teachers, while recognizing the independence of the kindergarten-trained children in many directions, find them too dependent on the teacher's help in handwork. If kindergarten teachers would plan simpler forms of handwork and be satisfied with cruder products, they would be able to develop in the children a desirable degree of independence.

The criticism by the grade teachers that kindergarten children want to talk and play instead of work is a criticism of the first grade rather than of the kindergarten. Two reasons for this so-called restlessness are that the seat work in the first grade does not call forth the thought or the effort of which six-year olds are capable, and that not enough time is allowed for active play.

Commenting upon the curriculum and methods of the kindergarten, Miss Temple points out that too great quantity and variety of intellectual material was introduced within a given period of time, and the subject matter was unwisely utilized to present ideas and ideals which belong not to the kindergarten but to a later stage of development.

She criticizes as devoid of real thought on the part of the children lessons which begin with a series of exercises dictated by the teacher the purpose of which is to help children take some simple blocks from a box, and are continued by directions as to certain moves with the blocks, and are finished by returning the blocks to the boxes in an exact manner. The definition of a right or wrong result in such a lesson is not determined by the fitness of the object made for the use of it, but whether or not it duplicates the form made by the teacher. It is pointed out that a chance should be given for testing the efficiency of the objects constructed and that a motive beyond a desire to please the teacher should be given to children's work.

The report goes on to deal with each form of activity in the kindergarten, drawing, language and literature, plays and games, and music, in every case offering constructive and stimulating suggestions for the improvement of subject matter and methods.

The spirit in which the Richmond survey was undertaken, the friendly cooperation with which it was carried on, the carefully prepared report, with its thoroughly practical and constructive recommendations, all unite to commend not only this particular piece of work, but also this type of work as worthy of being widely applied to kindergarten systems.

IV. RECENT PUBLICATIONS PERTAINING TO THE EDUCATION OF YOUNG CHILDREN.

"PLAY LIFE IN THE FIRST EIGHT YEARS.[1]"

Miss Palmer has carefully listed games and plays that are types of those best suited to the gradually developing powers of typical children of the ages from 1 to 8 years. Even a casual reader can not fail to get from these lists and explanatory descriptions a logical idea of the mental unfolding of the small child and the reaction he requires from his environment to further his growth into a well-balanced, useful citizen of high ideals.

The book is neither technical in phraseology nor difficult in style and is so definite in its portrayal of the type of games needed by the child at various stages in his development that it should be of great value, not only to the trained teacher, but to the parent or nurse or social worker who has the supervision of small children.

"PRIMARY HANDWORK" AND "ILLUSTRATIVE HANDWORK."[2]

The worth of the first-named book lies in the value-standard it sets. It does not view the primary currisulum as a certain amount of knowledge to be acquired by the child more or less painfully in preparation for the next higher grade; it sees each period of the child's development as a time seething with childish interests and enthusiasms which, rightly used, make of each school year a triumph of achievement, development, and happiness. The problems of construction are approached from the child's point of view and interest. The standard of the work is measured by the child's ability to do and think. The child's growth is shown by his increased ability to judge his efforts and intelligently measure his successes. This produces what Dr. Dewey calls a "child who has something to say rather than having to say something." Miss Dobbs shows clearly the way in which the artificial gulf between the kindergarten and the primary grades can be made to disappear.

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[1] By Luella A. Palmer.

[2] By Ella Victoria Dobbs.

In the second-named book are offered practical working outlines upon which the teacher may build. The object of the book is to prove by means of work already tried in actual schools:

1. That illustrative handwork can be used profitably as a method of study by giving the children something to do which they will wish to do, but which can not be done successfully without a practical knowledge of the subject matter to be studied.
2. That illustrative handwork can be used profitably as a method recitation by requiring the children to make something which they can not make successfully unless they have gained clear and definite ideas of the subject which has been studied.
3. That work of this kind not only has a place as a regular form of study and recitation, but that it can be done without exceeding the limit of time allotted to the subject.
4. That the equipment and materials are easily obtainable in any school.
5. That work of this kind may be carried on in the regular classroom.
6. That such methods may be used by teachers who have not been trained in the manual arts.

"A COURSE FOR BEGINNERS IN RELIGIOUS EDUCATION."[1]

Miss Rankin, a trained kindergartner, has brought her knowledge of child psychology and the knowledge gained from actual contact with many children to the problem of making a year's course of Sunday-school lessons that will make for a better feeling, thinking, and doing in the life of the little child, and that will also be quite simply and definitely stated, so that the average untrained Sunday-school teacher may use them literally as the supporting framework for her work.

"THE USE OF THE KINDERGARTEN GIFTS."[2]

The use of the kindergarten gifts carries from cover to cover a plea for a wider knowledge on the part of the teachers of every material to be used, and a greater insight into the process of the growth of little children. The book is of particular value to the recently graduated kindergarten student who has had a limited opportunity for actual teaching experience, and to the teacher who emphasizes organized group work in her school.

BULLETINS NOS. 1, 2, 3, 4, AND 5: BUREAU OF EDUCATIONAL EXPERIMENTS.

To quote from the preface in one of the bulletins:

> The Bureau of Educational Experiments is made up of a group of persons who are engaged in first-hand efforts for improving the education of children, and who have all shared in the general movement that has brought about a

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[1] By Mary Everett Rankin.

[2] By Grace Fulmer.

more scientific study of them. They feel that the development of some more comprehensive plans of utilizing the results of the recent interest in "free education" is the next step, and that it depends essentially upon securing a closer cooperation among experimenters.

The bureau aims to accomplish these ends by giving support to present experiments, by initiating new experiments, by collecting and making available for public use information about the whole field of experiments in education, and by hastening the introduction of newly acquired methods through actual teaching experiments.

The first bulletin is entitled "Playthings"; the second is a study of Animal Families in Schools; the third, fourth, and fifth bulletins describe the kind of work being done at The Play School, by Caroline Pratt; at The Gregory School, by Margaret Naumburg; at Teachers College Playground, by Mary Rankin; at The Home School, by Mattie Bates; and at "Stony Ford School," by Mr. and Mrs. Hutchinson.

"SELECTED LIST OF STORIES."

The literature committee of the International Kindergarten Union has published an excellent list of stories to tell to children in kindergarten, first, and second grades. In presenting the list the committee point out that extended lists prepared by libraries and other compilers are easily obtained; and for that reason it was thought best to confine the committee's endeavors to the preparation of a limited list of stories of distinctly literary quality, each story having a proved value and interest for children.

With the title of each story are listed several books in which different versions may be found.

V. KINDERGARTEN LEGISLATION.

The excellent mandatory-on-petition law has yielded such good results during the past five years in California that friends of the kindergarten have been stimulated to secure the passage of a similar law in other States. Their efforts have been successful in Maine, Oregon, Tennessee, Washington, and Texas.

In Maine the superintending school committees are required upon the filing of a petition coming from the parents or guardians of 30 or more children between 4 and 6 years of age, living within a mile of a public elementary school, to maintain a kindergarten as a part of the common-school course, unless otherwise instructed by the city or town. The kindergarten may be discontinued if the daily average attendance falls below 15 children. In respect to kindergarten teachers the law provides that no person shall be allowed to teach in any kindergarten who has not completed at least a two-years' course in training and received a certificate or diploma from a recognized kindergarten training school, approved by the State superintendent of schools.

In Oregon the peculiar provision of the kindergarten bill is that the establishment of kindergartens is confined to the city of Portland. the law stipulating that not more than five and not less than three kindergartens must be installed during the year.

The law of Tennessee is a permissive one—that is, cities and towns may establish kindergartens, but must support them by means of local taxation.

In the State of Washington the enactment provides that the kindergarten shall be a part of the school system and be supported just as the primary and upper grades are supported.

The Texas law is similar to that of Maine. A noteworthy feature of the campaign was the hearty support given to the measure by the officers of the State department of education. Emphasis also was placed upon adequate provisions for well-trained kindergarten teachers.

In a number of other States the Federation of Women's Clubs, the National Congress of Mothers, and other women's organizations are taking an active interest in State campaigns for more public-school kindergartens.

New kindergarten training schools.—Closely connected with the legislative successes in Texas and in California is the announcement of the opening of three new kindergarten training schools. The College of Industrial Arts, Denton, Tex., has organized a department of kindergarten education, with Miss Mabel Osgood, formerly of the Milwaukee State Normal School, in charge; and in the Sam Houston Normal Institute, Huntsville, Tex., a kindergarten department is being incorporated. Miss Grace Fulmer has opened a school in Los Angeles, Cal. Children's classes in kindergarten and primary work and a department of kindergarten and primary education for young women are included. Emphasis is placed upon open-air work.

A two-year kindergarten training course was organized in 1916 in the State normal school, at Tempe, Ariz.; a training class, under the direction of Miss Laura Fisher, was opened in Boston, the same year; and Miss Laura Cushman organized a training school in Miami, Fla.

Kindergarten departments are also being instituted in connection with the schools of education in the University of Nebraska, at Lincoln, and in the University of Missouri, at Columbia.

Appropriation for kindergarten education.—By no means the least significant event of the past year is the appropriation granted by Congress whereby Federal support has become available for the important field of kindergarten promotion and practice. Two specialists in kindergarten education constitute the staff for the present.

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DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 50

HOME ECONOMICS

By

MRS. HENRIETTA W. CALVIN and
CARRIE ALBERTA LYFORD
SPECIALISTS IN HOME ECONOMICS, BUREAU OF EDUCATION

[Advance sheets from the Biennial Survey of Education
in the United States, 1916–1918]

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1919

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HOME ECONOMICS.

By Mrs. Henrietta W. Calvin and Carrie Alberta Lyford,

Specialists in Home Economics, Bureau of Education.

Contents.—Introductory—Home economics in the public schools—State supervision of home economics—County supervision of home economics—State normal schools—Colored schools—Home economics in colleges and universities—Effect of war on college courses—Practice homes—Practical application of food courses in the management of lunchrooms, cafeterias, etc.—Smith-Lever extension work—New phases of home economics—Child welfare courses—Newly established and reorganized departments—Surveys—Organization of women interested in home economics education—Home economics and national service—Legislation relating to home economics.

Progress in home economics education has been marked in recent years. To the normal rapid increase in the number of high schools offering courses, the extension of systematic training in home making into the lower grades, the establishment of new courses in liberal arts colleges, and the more adequate support of departments previously organized has come increased impetus due to Federal and State legislation and to the recognition by war committees of their need of specially trained home economics women.

Knowledge of the importance of training in household arts has not been confined to the United States.

Queen Mary, of Great Britain, issued an appeal to English teachers to take up the study of home economics since the demands for teachers of " domestic subjects " was so much greater than the supply. She emphasized the increased need of these teachers for the period of readjustment after the war.

A leading English educator states:

> In view of the development of domestic training which may be anticipated both in elementary and technical schools after the war, in the interests of national health and national economy, there is reason to think that, so far from there being a surplus of teachers, there is more likely to be a difficulty in obtaining sufficient trained teachers to meet the demand for them which must arise.

The secretary of the Bombay provincial advisory committee, in requesting information from America, states that " there is a growing desire here to establish good schools for the teaching of domestic science and household arts."

From New Zealand come requests for the names of home economics women who can be secured to organize and administer the home economics instruction of that country, thus exhibiting an increased public interest in this type of school work.

Santiago, Cuba, questions as to the organization of instruction i "maternal schools" for young girls, stating that it has been proposed to enact a law establishing these in that Republic.

One of the leading normal school men of Japan visited the home economics department of the leading colleges and universities in this country because of interest in home making as a subject to be taught in the schools of that country.

The Ontario Agricultural College can not accommodate all who wish to come to Macdonald Institute for home economics training, and many desire home economics training who can not be spared from home. The college, therefore, is extending the usefulness of Macdonald Institute by opening branches here and there in such communities as are willing and able to cooperate.

Several of the missionary boards are asking for domestic science teachers in various countries, among them China. One call has just come from the Woman's Union Missionary Society, 67 Bible House, New York City, for a domestic science teacher in the school of the society in Shanghai, China. An opportunity is presented not only to teach domestic science to Chinese girls, but to train Chinese young women as teachers of domestic science, so that they will go out into the public schools.

HOME ECONOMICS IN THE PUBLIC SCHOOLS.

Courses of study and methods of teaching have been greatly modified by war conditions. The substitution of Red Cross and relief sewing for the usual projects of prewar times has so greatly improved teaching in textiles and clothing that there is little reason to believe there will be a reversion to the older type of projects after the close of the war period.

It has been possible to teach the effective use of the sewing machine in the fourth and fifth grades, to increase speed greatly, and at the same time secure a high standard of workmanship in sewing classes; to place responsibility upon children not heretofore considered mature enough to take any initiative, and to maintain interest in class work independent of personal possession of articles worked upon.

The sewing classes in the public schools of Chicago made 250,000 garments for Red Cross and relief work in the winter of 1917–18, and in all cities of the United States the production was in almost like proportion to the number of children in attendance.

The exhibition of children's ability in these lines is resulting in an entire change of course of study. More work of commercial value will hereafter be done; more speed will be attained; and more fundamental principles of good taste, good hygiene, and good economics will be taught.

The modifications in food courses have not been so readily adopted. This has been due to many complicating factors. Equipment now in use has been of a kind not easily adapted to new laboratory practices; cooperation of principals and superintendents of school lunches has not always been secured; there has been difficulty in articulating school work with the home life of the child, so that when it was desirable to secure food supplies from the home and return the cooked product to the home, parental approval has been withheld.

The changes in food courses have usually been along the lines of teaching the use of food conservation recipes, and explaining to the children the meaning of food conservation rules. Many home economics teachers have gathered the mothers into regular classes and instructed them in food preservation and food conservation. The following material has been gathered by a supervisor of home economics:

1. In one of the large private schools in St. Louis all advanced work for the older girls consists of Red Cross work in dietetics and the girls take the Government examinations at the end of the course.

2. At the North Bennett Street Industrial School the following report is given of the work in the school:

> Substitution of entire wheat, bran, graham, cornmeal, and rye wherever it is possible in quick and yeast breads, gingerbread, and inexpensive cakes.
>
> Substitution of oleomargarine, mazola, salt pork for butter, and effort made to use as little as possible. Substitution of leguminous vegetables, nuts, cheese, and fish for meats.
>
> No meat up to the present time has been served in our lunch room. For the past two weeks all desserts requiring sugar have been replaced by fruit salads, plain fruit, dried fruit dishes, cakes and puddings sweetened with molasses and sirups.
>
> Substitution of molasses and sirups for white sugar in all desserts possible.
>
> Much more drill and intruction in use of substitutes and balanced menus than before.

3. The School of Domestic Science at the Young Women's Christian Association in Boston reports the following changes in the work:

> The regular textbook, "Menus and Recipes for Fifty," is not used except for meats and vegetables. New recipes are being worked out to meet the Government requirements. As in all other places, they are emphasizing the reduction of the amount of meats, sugar, wheat, animal fats, etc. At their breakfast, which is prepared by the students in the domestic science class for their family of 50, their main course has been omitted in order to meet the situation.

4. At the Practical Arts School in Boston, which is an entirely different type of school, the following summary of work is given:

> We plan first to adhere as closely as possible to our former course of study, believing that in an educational institution the pupils must still be taught the underlying principles of cookery.
>
> Second, we do this, however, by using for the illustrations of those principles, so far as possible, the foods recommended as substitutes by our food administrator; for example, vegetable oils in place of animal oils; rye and other dark flours in place of wheat.
>
> Third, to keep closely in touch with the food situation as to supply prices and to use these topics in our feed study and dietetics classes. To emphasize the

need of conservation along the lines of time, energy, health, fuel, and clothing as well as in foodstuffs. To keep the prices in our lunch room at the lowest possible level for obvious reasons. So far there has been practically no increase over former prices except in the case of rolls or muffins, and butter.

To observe carefully the meatless and wheatless days advocated by the Government. To serve little cake, no frostings, few sweet puddings, etc., and to omit extra sweetening wherever possible.

To encourage our pupils to give their time freely outside of school to patriotic enterprise. To this end they assist every day in the Liberty Bread Shop, Food Facts Bureau, and our own relief work.

In the Cambridge Trade School they are preparing nearly 100 quarts of corn chowder, which they are selling to the pupils at 11 cents a quart. This is taken into the home with the card stating the food value of the dish, to make the parents realize that the school is trying to give the girls practical work which should be of real value in their own homes.

The Vocational School for Girls in Brookline submits the following report on the work being done in regard to changes in food courses:

> The work has been subject to change without notice almost, as various needs have seemed to rise. We have worked with corn meal and other corn products, with rye and rice and oatmeal, with substitutes for sugar even before the acute need was thrust upon us from the impossibility of obtaining sugar. We have worked upon the substitute sweets earlier than we should otherwise have done, both because of the needs for supplying to our own pupils legitimate and desired sweets, to lessen, if possible, the use of those not allowable; and also because the girls have wished to pack boxes for their brothers and friends in France and to aid school sales for war causes. We are teaching the use of substitute fats, and the elimination of the use of fat in cookery, of course! We are laying stress upon the various winter vegetables as savers of other foods and upon the use of fruits and ways in which the canned foods may be well prepared and served.

Some teachers of food classes have been able to establish cooperation enterprises. In Yonkers, N. Y., there were 20,000 quarts of currants offered the schools. This was made into jelly to be given to the Red Cross. Containers were needed and the milk men left slips at all houses on their routes that they would collect and take to the school all containers contributed. A local refinery gave 600 pounds of sugar. Local ladies did the work, both learning and doing.

These are but illustrations of the changes in method and spirit that have developed among home economics teachers, pupils, and mothers as a result of necessary modifications of cooking practices.

The important developments in home economics in elementary and secondary schools in Ohio have been through the school lunch work, especially in rural and village schools, and with girls' home making clubs.

North Carolina reports "many schools are adding departments of home economics."

Home economics is rapidly introduced into the high schools in Washington. A State law provides that either home economics or agriculture shall be taught in all eighth grade classes.

The State of Florida especially evidenced interest and appreciation in home economics education by the following legislative act:

> *Be it enacted by the Legislature of the State of Florida:*
>
> SECTION 1. Any county board of public instruction, or the board of trustees of any special tax school district, is hereby authorized and empowered to establish and maintain a department of home economics, or a department of home demonstration work in any of the high schools of this State, and to pay the expenses of such department out of any public school funds at their disposal.
>
> SEC. 2. Section 1 of this act shall extend to and include canning clubs, corn clubs, and departments of agriculture, to acquire land, stock, fertilizer, seed, and implements necessary to maintain the same. And no person shall be employed to demonstrate, teach, or instruct in any of the departments mentioned herein who does not hold a certificate of graduation from a recognized college, university, or normal school, indicating special training in home economics, home demonstration work, or agricultural work, or any one who has not had satisfactory experience in home economics or canning club work.
>
> SEC. 3. County boards of public instruction are further empowered under this act to employ county agents who shall, under the joint supervision of the county superintendent of public instruction and the Florida State College for Women or the University of Florida, conduct practical demonstration work in home economics, girls' and women's contest work, canning club, corn club, or agricultural work, and other movements for the advancement of country home life, and shall aid the county superintendent and teachers in giving practical education in home, farm, or garden economics.—From Florida Laws, 1915.

The full effect of the Smith-Hughes Act will not be felt for a number of years, but even in this one year, when organization was still under way, much has been accomplished.

The Ohio State University finds that the new Smith-Hughes law has made it possible to train teachers for this at this department and to establish two practice schools, one in a small village, the other in the city. There are 20 vocational home economics schools in the State that will be supervised by the division of practice teaching in this institution.

STATE SUPERVISION OF HOME ECONOMICS.

At the time of the passage of the Smith-Hughes Act only four States had deemed it desirable to provide a State supervisor of home economics instruction. Since the passage of that act there are nine supervisors of home economics in State departments of public instruction, and in 15 States there is part-time supervision provided by the cooperation of State institutions of higher education and the State superintendent of public instruction.

In some cases the supervision is to be for Smith-Hughes schools only, but in others all home economics departments in public schools will receive this assistance.

The most marked change in elementary and secondary home economics is the breaking down of the rigid division of work which heretofore has existed between foods and clothing, and a blending together of these and household administration instruction into a unified course in home making.

This, in turn, is creating a demand for public school home economics teachers who have been trained in all of the various lines of home economics instead of specially prepared to instruct in but one phase of the subject. The tendency is toward detailing a teacher to take charge of the whole course for a given class instead of allotting one teacher for sewing, another for cooking, a third for home nursing, and a fourth for personal hygiene or household accounting.

With the increased time for instruction in home economics, toward which school authorities are now tending, and with a more consistent, homogeneous course, a superior type of teaching is possible.

Better elementary instruction is preparing the way for more advanced high-school work, and this in turn is stimulating normal schools, colleges, and universities to base their entrance requirements on high-school home economics instruction and to build their courses on broader and more scientific lines.

The rate of extension of home economics in public schools has been about 1,000 high schools per year. This does not indicate the increased length of periods given the subject.

Usually home economics when established in a school system is required in certain grammar or intermediate grades and is elective for girls in the high school.

The policy advocated by the Bureau of Education has been stated in the bulletin entitled, "The Public School System of San Francisco," in which the following appears:

> No rigid course in home economics can be planned that may be applied to all sections of a large city. All courses in home economics should be adapted to the needs of the communities in which these courses are offered. The end attained should be the same, but the means used should vary with the condition of the neighborhood where the work is given.
>
> From the poorer sections in the cities the children of foreign parentage are often older than the average student in their grades, and since many of them leave school before completing the eighth grade, and since also they are particularly appreciative of the practical phases of education and thereby may be induced to continue in school, it is usually necessary to adjust the home economics course to meet their conditions and to stress the practical phases of the work. In sections where the children usually continue through the elementary grades and enter the high-school courses, a home-economics elementary school course somewhat less intensive may be best adapted to their needs. The latter course may logically lead directly to the high-school courses in the same subject and be so arranged that the one becomes the basis of the other.
>
> Every girl in the city high schools should be required to pursue one year of home economics. This course should be equivalent to a full unit[1] of work and is most effective if it consists of two recitation periods and three double periods

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[1] Equivalent to a five-hour course carried through one entire year.

for laboratory each week. This course meets the needs of the students in the courses leading to university entrance, and of those who pursue such vocational courses as are offered in the business high school and trade high schools.

Elective home economics courses should be in every high school except business and similar vocational schools, while specialized vocational home economics courses should be offered in one or more high schools in a large city.

Specially adapted courses of home economics designed to meet the natural limitations of the blind, deaf, or mentally subnormal are an essential unit of all large city school systems. Deaf children become expert in any or all household activities and through these courses may be led to vocational courses affording agreeable occupations and assuring adequate self-support.

These variations and adaptations of courses do not indicate that each teacher is to plan her own work or modify the course given; on the contrary, it means definitely and carefully planned courses which are consistent throughout and which lead the student to a predetermined goal in her training by methods adjusted to social and economic needs.

Classes in food preparation should be established for boys of the sixth, seventh, and eighth grades. If time can not be found for these during the usual school hours, they should be offered at hours convenient for the boys. While these courses are approved for all school systems, they are particularly needed in the cities of the Pacific Coast States, where so many boys go into camps of various kinds during the summer months.

Time.—Elementary school home economics instruction should begin in the fifth grade. Through this grade and the sixth grade the subject should be given four 45-minute periods of student time per week; through the seventh and eighth grades, from seven to nine 45-minute periods per week should be the minimum for home economics instruction. The 45-minute periods should be grouped so that the actual work shall be 90 minutes twice each week for fifth and sixth grade children. It is possible with the usual arrangement of school schedules to arrange two classes of this type before the noon recess and two classes in the afternoon.

The seventh and eighth grade students should report to home economics work in half-day periods twice or three times per week.

Two of the eight periods in the ninth-grade work should be given to recitations, and laboratory classes should be arranged for three double periods each week. Selected groups of children in the fifth, sixth, seventh, and eighth grades can, with advantage, spend from one-third to one-half of their entire school hours in these home economics classes.

High-school girls should be able to elect courses in home economics and related sciences up to one-half of their entire school time.

The foregoing recommendations agree with the more advanced ideas and practices in the stronger school systems of the country.

COUNTY SUPERVISION OF HOME ECONOMICS.

An interesting organization of home economics courses for county work has been effected for Shelby County, Tenn.

Home economics was first introduced into the Shelby County schools in 1913. Now (1917) there are 18 regularly established home economics departments, conducted by trained teachers instructing 950 students. During 1916–17 eleven regular grade teachers also gave lessons under the direction of the county supervisor, instructing 135 grade children.

For the past two years the home economics courses in the Shelby County schools have been in charge of a county supervisor. The supervisor is the regularly appointed county agent employed by the Department of Agriculture to organize and conduct the girls' club. Her work is so arranged that she gives part time all through the winter to supervision of school work for which she receives compensation from the county board of education. Teachers' meetings are held once a month. All teachers report at the general meeting, after which the home economics teachers meet in special session in the County Home Economics Association, an organization of which they are all members and in which their special problems are discussed. This organization has been responsible for the preparation of a county course of study for the home economics classes in elementary and high schools. The course was adopted in the county two years ago (September, 1916), and has been followed with necessary adaptations since its adoption. The national emergency has made necessary special lessons in food conservation. These have been provided for by the county supervisor through the County Home Economics Association, in which they have been discussed. Special mimeographed instructions have been sent out for these lessons. The association has agreed upon the use of an elementary textbook for the grade classes and an advanced textbook for the high-school classes.

The county supervisor visits the schools once in four or five weeks, observes the lessons, looks over the condition of the laboratory, consults with the home-economics teacher, and acquaints herself with general school conditions. She has also been making a special effort to further the science work in the high schools and offers suggestions and criticisms to those who are teaching science.

The equipment for the home economics laboratories is ample and for the most part well arranged and in good condition. The total equipment, including laboratory desks, stoves, utensils, and machines is valued at $5,600. Five hundred dollars' worth of this equipment has been furnished by community clubs and school activities. In one of the two schools temporary arrangements are soon to give place to improved conditions. A uniform type of desk has been used in the county, but considerable latitude has been permitted in the quantity of equipment and its arrangement in most of the schools. Where funds have been adequate, expense has not been spared to make the equipment both permanent and attractive. In several schools the desks are white enameled and lend a particularly attractive appearance to the room, but in the laboratories more recently furnished a desk with oak finish has been adopted, as it promises to give more satisfactory results in durability. Oil stoves are very generally used in the schools, for they are in use in the houses of the county. The oil stoves are included in the equipment in sufficient number to give the girls good practice in their management.

The home economics lessons begin in the fifth grade in a few schools and continue through the four years of high school wherever possible. The classes are not large and in most schools do not completely fill the time of the special teacher, hence the special teachers teach various other subjects in the school.

The teaching of food values and methods of food conservation is not limited to the home economics classes. The teachers in the grades give simple lessons to all of the children on the classes of foods and their use in the body. This work is taken up in the various classes with which the subject can be correlated and is supervised by both the county supervisor and the special supervisor of home economics.

The presence of the State Normal School in the county has been of great help in building up the home economics courses in the county schools, as the able teachers in the normal school have given it their support in every way. The household science director in the normal school has acted as president of the County Home Economics Association since its organization.

The organization of the teachers of home economics under the leadership of a county supervisor and the close touch with one another provided through their County Home Economics Association is a specially strong feature of the home economics instruction in the county. The adoption of a course of study and the uniform textbook also serves to give strength to the work. The teachers have been chosen with care. Not only have they had special training, but also they are especially imbued with enthusiasm for their work and have a definite interest in the problem at hand. For the most part they are very young and but recently out of school. The salaries paid make that inevitable. Considerable care has been shown in the selection of the various other subjects which they have been asked to teach. For the most part the subjects assigned them are related to their special line of work, for example, biology, agriculture, and physics. Some are teaching as many as four subjects in addition to home economics. In those schools in which the number of pupils in the home economics classes is small, this seems unavoidable at present.

Hamilton County, Tenn., has a similar arrangement whereby the county agent acts as supervisor of home economics for the county schools. One of the immediate results of this supervision has been the introduction of home economics lessons in the suburban grammar schools of Hamilton County and the development of a uniform course of study.

STATE NORMAL SCHOOLS.

The home economics departments in the State normal schools have been vitally affected by the forces that have been at work during the past two years. As was to have been expected, in schools whose students are living on a very narrow margin of income, the attendance has decreased. This decrease in attendance has been appreciable among students taking the special home economics course, but there has been nothing to indicate that the courses have been permanently affected thereby. On the other hand the efforts to give instruction in food conservation to the entire student body in the normal schools have been so successful that several schools report that a general course in food study is to be permanently required of all students in the normal school, men and women alike. Thus a greater number of students is being given instruction relative to the place of home economics in general education, and a wider interest is created in the home economics teaching in the public schools of the country.

The changes that are being wrought in the normal school curriculum through the Smith-Hughes Act have not been in force for a period of sufficient length to have made a well-defined contribution to home economics education, but they promise to do much to further the standardization of courses and methods in those schools which come within scope of the act.

The necessity for conservation in our national life has acted as a spur to normal school teachers and pupils alike, and there has probably never been a year when courses were more alive and work more intensive than during the 12 months just past. Old courses have been altered and new courses have been framed to meet the needs of the country. Community interests have been made the basis for school problems. The home has come to be regarded as the laboratory of the home economics student. Home economics principles have begun to take deep root in daily practice of the individual, the family, and the community. The national emergency has been the means of accelerating the forces that have been operating slowly through many years, bringing to a focus much for which home economics teachers have long been striving. Thus the need for immediate conservation has made possible the placing of greater emphasis on economy in food, clothing, and other phases of living. Courses in fancy cooking and elaborate serving are being abolished in the normal schools. Experimental cooking with a view to the use of proper substitutes has taken the place of these courses. Sewing on expensive materials for personal wear has given place to Red Cross sewing, foreign relief work, or sewing for community needs. Remodeling of old garments and the intelligent care and laundering of the wardrobe have received emphasis. The relation between the school garden and the home economics department has been recognized by close cooperation. More attention has been given to the body requirements than formerly, and this has resulted in an increased number of courses in dietetics, a more earnest study of the nutritional needs of school children with intelligent planning for school lunch work, and a closer cooperation with other forces in the community working for public health. One of the most valuable of the lessons of the year has been that which has come from placing much of the responsibility for the new phases of the work with the students, securing their cooperation, developing their initiative, and helping them to learn by giving out to others all that has come to them through study and investigation in the laboratory. Thus students in the normal schools have held classes in dietetics in the community; they have passed on, by means of demonstrations or through the local papers, recipes they have worked out; they have arranged food and clothing conservation exhibits and have organized club work among small girls. Several normal schools have added special demonstration courses to prepare their stūdents for this community work.

The following statement in regard to the methods of carrying on practical work in one of the normal schools shows the tendency to make the work contribute to the needs of the school as well as to give the students practical problems:

> We are installing a large school cafeteria, equipped to serve 1,000 at a meal, and we expect to use this to further our food conservation campaign. We are making arrangements so that all food which is used even in experimental work in the laboratories can be sent to the cafeteria, the idea being to minimize any tendency toward eating food during the laboratory time. We expect to use the cafeteria as an educational means of teaching proper food combinations through bulletin work. The girls in elementary dietetics as well as the advanced class will keep a record of the way the students are eating and will give suggestions for wise selections through chapel talks and our school paper.
>
> A number of girls who are leaving this year to teach in high schools are planning to have the first-year high-school domestic science work as it has been generally given, except that food prepared by these girls will be used in the small school cafeteria and the second-year domestic science girls will run this. The second-year girls will be divided into two groups, the one preparing the food, the other managing. The work of these groups will alternate.[1]

Throughout these months of increased activity the normal schools have had occasion to give time to the consideration of the real purpose of their courses in home economics. Recognizing the fact that it is the function of the normal school to prepare teachers for the common schools, they have made a greater effort to give instruction in home economics problems to all elementary and rural teachers and have put less stress on the preparation of special teachers of home economics. Because of the growing tendency throughout the country to require that all high-school teachers hold college degrees, the normal schools are having less demand for teachers of home economics for high schools. One normal school has lengthened its course for special teachers to four years in order to meet the standard of the high school. Another normal school has entirely abolished its course in home economics designed for the preparation of special teachers of the subject, because of the lack of demand for special teachers in the common schools of the State.

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[1] Report received from State Normal School, Emporia, Kans.

Little uniformity has existed in normal school courses, because of their necessary compliance with widely differing local conditions, but the teachers are beginning to feel that they have some problems in common with one another. In one State the normal school teachers of home economics have come together to work out a course of study for the use of the elementary school. They have formed an organization which is the means of bringing all the teachers of the State together and is doing much to raise the standard of home economics teaching.

A conference of home-economics teachers of the State normal schools of New England was held in Boston, Mass., February 16 and 17, 1917, at the call of the commissioner of education. This was the sixth in a series of sectional conferences, the first of which was held November 17, 1915. Groups of normal-school teachers having similar problems have been brought together at each of these conferences. Inasmuch as conditions varied widely, interesting discussions developed, and suggestions were made for possible changes in existing conditions. The following summary of the discussions suggests the nature of the problems which arose:

1. The course given in the normal schools should be planned with a definite purpose in mind. This purpose may be one of the following: (*a*) The preparation of special teachers of home economics for the common schools of the State; (*b*) the preparation of rural teachers so that they may give lessons in home making or conduct a lunch in addition to their work of general teaching; (*c*) the acquaintance of all normal students with the fundamental principles of home economics, that they may recognize its place in the general school curriculum, that they may be able to cooperate intelligently with the special teachers of home economics, and that they may be prepared to undertake the task of home making intelligently.

2. The time allowed for a course should be sufficient to provide adequate training. If special teachers of home economics are to be trained, a special course of at least two years is absolutely essential and a course of three years is preferable. If the lessons are to prepare rural teachers to handle classes in cooking, serving, and home making, a general or survey course of five periods a week for an entire

year should be required. This course should include or be accompanied by observation and practice in the teaching of home making and in the preparation of the school lunch in the rural school. A similar course should be offered the general student.

3. Entrance requirements for the course should be definitely defined. This is particularly necessary to the success of the course for the special teacher. Entrance requirements will necessarily vary according to the development and needs of the particular community. Courses in home making in the grades and high school should be required for entrance just as soon as such courses become general in the community.

4. The short course in home economics should be well balanced and include simple problems in home making, elementary study of foods, cookery, textiles, and serving. It must include both laboratory practice and lecture periods.

COLORED SCHOOLS.

In the colored schools of the South there has been progress in the courses in home making of recent years, because of better-trained teachers, more facilities for work, and a developing system of supervision. The majority of teachers have received preparation in industrial schools, and some have been brought together in county institutes for instruction and have attended summer schools for further study. In some States special courses giving suggestions for lessons in home economics are sent out to the teachers. Most of the States have county and State agents, who keep in touch with the work through personal visits and correspondence. County agents are able women qualified to instruct in industrial lines and to guide the teachers in their work. Since the beginning of the war this work has been given a remarkable impetus. Home gardens have been planted in greatly increased numbers, and large quantities of fruits and vegetables have been canned, dried, and stored for winter use. Industry, thrift, and sanitation in the home have resulted from the work of the supervisors.

While better school buildings and equipment have been provided for the colored schools, the high cost of living has seriously retarded the industrial work in many places, because funds to provide material for work have been inadequate or totally lacking. Many have been the expedients to which ingenious teachers have had to resort to secure materials for the classes in cooking and sewing. School lunches, sales of foods cooked, the keeping of a school garden, the use of flour sacks for fashioning undergarments, making over old clothes, and sewing for the teachers have been practiced in many schools. In a great number of cases teachers have themselves contributed materials for the work. This uncertain system of securing supplies has been a serious detriment to the development of the work, and the condition should be remedied, if effective work is to be done. Notwithstanding the drawbacks under which the industrial teachers have labored in the colored schools, the annual school exhibits which form an important feature of their work have steadily improved in character. The articles made in the sewing classes have become more simple and better adapted to the needs which they are to answer. They show better taste in color and design, a truer economy in the selection of materials, and a higher standard of workmanship. In cooking exhibits the chief stress has been put on the canning and drying of food products, in order to emphasize conservation and economy. Fancy cooking and candy making are giving place to an honest presentation of the homely needs of daily life. As these exhibits are serving to set standards for the community and to convince the people of the value of the school work, they can well be regarded as a factor in community development. In those schools in which boarding departments are maintained an improvement in the standard of living is noted both in the care of the building and in the meals served. This is felt to have resulted very directly from the teaching of home economics that has been done throughout the South.

HOME ECONOMICS IN COLLEGES AND UNIVERSITIES.

The report of development of home economics in the University of Illinois during the past two years, 1916–1918, may be considered typical of the best home economics departments of the country. It is as follows:

> The regular work of the department has been marked by an increase in attendance, by an emphasis upon food work, owing to war conditions and emphasis upon extension work because of the Smith-Lever and the war emergency funds. The development of the food work has been along two lines: *For the undergraduate student:* Emphasis upon what might be termed practical dietetics, so that the students could interpret to the general public scientific feeding in terms of daily life. An attempt to take this direct to the university public in the lunch room, through charts and suggestions about selection of food. Second, experimental work in food substitutes. *For the graduate student:* The emphasis was upon the problems of nutrition, including the feeding of the child as well as the adult. Third, owing to the increased costs of living, emphasis has been put on economics of the family and through cooperation with another department of the agricultural college, some studies are being made in the cost of living. Fourth, a special problems course has been changed into a course designed to give extension workers a broader conception of extension work and its significance in the development of family and community living.
>
> The university has for many years retained a practice apartment as a laboratory for household management. The passage of the Smith-Hughes Act has made

it necessary to enlarge those laboratory facilities, and arrangements have been made with the university authorities for the use of its university cooperative houses for the teacher training in Smith-Hughes.

The practice work in home economics for teachers has been conducted in connection with the Champaign and Urbana schools for several years. These schools are typical of the schools into which the university graduates go as teachers and afford excellent training for the conditions as they exist in Illinois. The Smith-Hughes bill occasioned a readjustment and an enlargement of the work already being conducted, two additional instructors and a special division of subject matter and method being provided for the teacher training work in home economics. Two new courses have been added, a course in economics of the family group and a course in interior decoration.

In 1916 a series of five lectures was provided to reach the non home economics women of the university and also the women of the community. These lectures were given by heads of various university departments, and presented phases of production, conservation, transportation, and distribution of food supplies and food products.

A two weeks' intensive course in canning, preserving, and drying was given, open to members of home economics classes who volunteered for summer service in their home communities.

A similar course was given for nonuniversity women.

Red Cross classes were given in nursing, dietetics, and surgical dressings.

Special classes were provided in institutional management for serving large groups of people and in conducting lunch rooms, etc., on a war basis.

Special courses were given for fraternities, boarding-house keepers, commissaries, etc.

Two special courses were conducted as supervised by Dean Olin Templin for non home economics women.

No courses have been offered for men students here, but all the commissaries of the fraternities and sororities were invited to special lectures adapted to their needs, and in many cases personal assistance was given to the men commissaries.

Introduction of hot noonday lunch in many rural schools has been emphasized. The work in the Urbana and Champaign schools is under the direction of the department of education of the university and under the supervision of specially trained teachers for that work, and some important developments are expected in the present year.

There has been no State supervisor of home economics in connection with the State superintendent of public instruction until the passing of the Smith-Hughes Act. There is now a woman who passes upon the merits of the high schools applying for home economics under the Smith-Hughes Act, and it is expected that the university will have its supervisor of teacher training follow up the work of its students after they leave the university. The State leader in home economics demonstration unites the work of the States Relations Service and the extension division of home economics in the University of Illinois.

The most important State legislation is an act providing for the proper lighting, heating, and ventilation of rural schools, also proper water supply and sewage disposal system. Suggested provision to be met on penalty of forfeiting the district's share of the public school fund. With the State demanding proper sanitary conditions for children at school, we have splendid basis for persuading the home to use equal care in promoting child welfare.

The effect of the war upon home economics instructions is indicated by—

(a) Increased enrollment in courses offered at colleges and normals and readjustment of courses to suit specific war needs.

(b) Increased demand for extension lectures and demonstrations.

(c) The accrediting of home economics (for one or two entrance credits) from 195 of the 239 accredited high schools of the State, thereby giving recognition to this work of the secondary schools.

(d) The employment in 14 counties of home demonstration agents.

(e) The cooperation of Council of Defense agencies in the city and country alike with the State Relations Service for food conservation.

Aside from the changed emphasis demanded by war conditions, the attempt is being made to put the extension teaching in home economics upon a better educational basis. First, by the classification of the material to be taught along distinct lines of food, clothing, equipment, family accounts, public health; and second, by better organization and presentation of material along these lines.

The home economics teachers' branch of the Illinois High-School Conference has established uniform courses for both elementary and high schools for Illinois.

EFFECT OF WAR ON COLLEGE COURSES.

Certain movements were common to all colleges. Many institutions either made direct use of the food administration's courses of study or blended the substance of these into their established courses. Almost every college placed especial stress on food preservation as well as upon food conservation. Red Cross sewing was done both in and outside of regular clothing classes, while special instruction was given in surgical dressings, first aid, and knitting. Almost all colleges opened special classes to local townswomen.

In Teachers College, Columbia University, the school of household arts has made the following adjustments and advancements in teaching the various courses in home economics:

Establishment of practice houses.—During the last year a practice apartment has been in operation in a nearby house, practically under the college roof. It is self supporting. The apartment is occupied by six students, five of them majoring in household administration, and one, the director of the group, majoring as a teacher of vocational homemaking. The students do all the work of the apartment and receive eight points of college credit for satisfactory performance of duties. The period of occupancy is for one term of about 17 weeks. The schedule is so arranged that each student has opportunity to serve three weeks in each of the several capacities, of cook, housekeeper, waitress, hostess, etc.

It is hoped to increase the number of practice houses as rapidly as there is demand, for the purpose of offering managerial practice to teachers in training for vocational homemaking and home practice to young students with only laboratory experience. In addition it is hoped to demonstrate the possibility of a better system of housing for many students who can not be accommodated in the college dormitories

There has been no marked reorganization of the department of household arts education during the past few years, with the exception of the establishment of the committee basis in the staff, the chairmanship passing from one member of the staff to another each year.

As indicated elsewhere in the report, special provision has been made for the training of extension workers and for teachers of vocational homemaking. Furthermore, as a means of extending the experience of the student teachers and of combining training and service, a group of students who have been teachers before entering Teachers College have volunteered their services in the home service section of the American Red Cross as food advisers in families where needed.

Opportunities for practice teaching have opened in one of the New York City high schools, and it is hoped that the privilege may be extended.

An experimental school lunchroom has been opened in the elementary practice school, providing simple school lunchroom experience for student teachers as a phase of their practice teaching.

A phase of work introduced during 1917–18 was the opportunity for juniors to become acquainted with the practice teaching problem. They serve as assistants to the seniors in their teaching, and meet for conference five times during the semester with their supervisor. This has proved to be a very helpful basis for the actual practice teaching of the senior year.

The teaching staff holds weekly conferences to which, from time to time, are invited members of the faculty of Teachers College, graduate students, and others who present in an informal way certain phases of educational philosophy, sociology, and methods which they have specially developed.

New graduate courses.—1. Graduate courses in household arts education practice are so arranged that the piece of individual work done by each student is a problem in itself and in a certain sense always a new course.

2. Education 294B, vocation for girls and women, opens up the field of various occupations for girls and women related to the household arts as well as to other avenues of work.

3. During the last year two new majors have been offered in household arts education—(1) Teaching vocational homemaking; (2) training for home demonstration agents in rural communities.

The following are offered as the most outstanding developments in elementary and secondary schools in relation to home economics education:

(1) Unification of all phases of home economics work under one course, when for general education—not "domestic science" and "domestic art" separately.

(2) The organization of courses under the "unit" scheme.

(3) The use of the problem-project method of instruction and organization of courses.

(4) The introduction of projects for community and international service in the work in sewing.

(5) The use of the school lunch room as a means of utilizing food products, and of furnishing experience in family quantity cooking; also as a means of teaching table service and etiquette.

(6) Socialization of the home economics course of study by every possible means (e. g., preparation of food by W. I. H. S. during influenza epidemic).

(7) Encouraging the social instincts of the girls by utilizing them in preparing for social affairs of the school.

(8) Providing work in home economics suited to their needs for boys.

(9) Vocational home-making courses in the high school, for high-school girls and also for women who wish to come to the school for special training along this line.

State supervision of home economics.—While Teachers College does not conduct supervision of State instruction, it prepares women for this work. The course "Education 137–138, Supervision of Household Arts in Schools," aims to open up the field of State and school supervision of the home economic studies. Since the operation of the Smith-Hughes law the demand has increased for State leaders of home economics under this bill as well as for supervision and criticism of practice teaching in home economics studies in normal schools and colleges. This course, with others in general supervision of school instruction, aims to prepare for State supervision of home economics.

Effect of the war on the interest in home economics instruction.—To meet the demands for education along the lines of home economics, various courses of a popular nature were given during 10 days in the latter part of May in the form of emergency courses. These were largely attended, and it is significant of the increasing interest in home economics instruction that large numbers of the registrants for these special courses were from the school of education as well as from the school of household arts.

The character of the regular course offered has been changed considerably to meet the new demands and interests of the students and the needs of the times. Experimentation with various substitutes for the foods needing strict conservation with a view to issuing reliable recipes for general use was carried on in the foods and cookery department. The need for a greater number of methods of food conservation was met by the organization of new courses in canning, preserving, and drying of foods. Conservation and renovation problems were also undertaken in the textile and laundry departments and met with a respose that demonstrated the interest and the need.

The interests in fields of study have been changed and broadened also by war demands, in that the need for people qualified to fill administrative positions as dietitians and institutional administrators of various types has been so pressing that many who had heretofore looked forward to teaching have changed either temporarily or permanently into these other fields of work.

Another effect has been apparently to increase registration in home economics departments of the college. Contrary to expectation, the home economics classes have held their own in numbers or have even increased in enrollment.

New features in home economics extension work.—Three new features characterize the preparation of women for home economics extension service:

(1) Beginning 1918, Teachers College offers a major in household arts for rural extension teachers. This major is open to women especially qualified for the work. The special entrance requirement is two years' study in an approved college. A program of studies, 54 points, may be chosen from the fields of foods and cookery, nutrition, clothing and textiles, chemistry, bacteriology, hygiene, administration, and nursing. In addition, courses in education and rural sociology will be required. The completion of this major entitles the student to a regular Teachers College diploma.

(2) The second new feature for the year is the opportunity of investigating rural conditions and getting practical experience in connection with the work of the home demonstration agent through direct participation in the field. Through special arrangement with the department of rural education of Teachers College and Warren and Huntington Counties, N. J., household arts students who desire it are given this opportunity.

(3) The school of practical arts of Teachers College has planned a midwinter session of six weeks for the benefit of home demonstration agents who care to avail themselves of the opportunity for further training.

The department of institution administration of Teachers College, Columbia University, with increased numbers of students has arranged the work this year under three specialized heads. The groups preparing for cafeteria management are having special work, both in the classroom and of a practical nature in the field under direction of Miss Florence La Ganke, formerly in charge of the cafeteria at Western Reserve University, Cleveland. This practical work is especially emphasized this year, for unusual opportunities have been afforded for students, not only in the cafeteria of the Horace Mann School for regular work, but also in connection with the college commons for the feeding of the Students' Army Training Corps. Besides this, as many former Teachers College students are in charge of cafeterias in New York City—in lunch rooms for employees in banks and department stores, in cafeterias for business women, etc.—the experience has been a varied one which our students have been able to obtain.

A special group, training to be dietitians, have their practical work under the direction of Miss Eleanor Wells, president of the American Dietetic Association, New York City. Because of the great demand for dietitians, this side of the work has been developed this year, and for the first time we have been able to have the full time of a special dietitian to supervise the field work in hospitals. Through Miss Wells's acquaintance with the dietitian problems here in the city, it has been possible to give our students practice experience to a greater degree than before. A special leaflet is issued describing this work.

The third group—that of the managers of dormitories, clubs, etc.—has been put under the direct charge of Miss Katherine Fisher, who came to Teachers College last year from Macdonald College, Quebec. Again, with this group the practice work is being emphasized in connection with dormitories, Y. W. C. A.'s, and clubs in the vicinity. A close link is being worked out between managers of boarding halls and this department for further opportunity for practice work.

Following this practice work, in connection with their regular class work, students are required in every case to give a stated period of time in the field following the period of training.

The demand for institution workers has never been so great as during this past year; this includes not only the specialized fields of dietitians for cantonment service and also over-seas and for cafeteria and hostess work in connections with camps, but also an unusual demand for organization of departments of institution administration.

In connection with household administration a housewife's bureau for helps in housekeeping (other than food) has been organized. The bureau has special exhibits, posters, clippings, shelf of suggested readings, equipment, leaflets, etc., pertaining to the special subject of the week. This work is under the supervision of a graduate student who cooperates with the different members of the household administration department. Special meetings are scheduled during the week which housewives may attend, and many outside lecturers are called in to talk upon special topics.

The final summary of the work of this bureau will be suggestive for teachers in other communities.

Special courses for home makers are being presented in connection with conservation problems.

Simmons College reports as follows:

The war has made new demands on the department of household economics at Simmons College, as it has on technical departments everywhere. Existing courses in cookery, dietetics, and sewing have been modified to suit the times; advanced specialized electives have been introduced; extension courses have been increased; lectures and demonstrations on food conservation have been given for students in other schools and for the public; and members of the staff have done much advisory work on public committees and in editing various publications.

At the Florida State College for Women special courses in home economics have been given continually, since the declaration of war, for all non home economics students who wish to take lessons in food conservation and production. Besides this, in September, 1917, a conservation short course was given to the women of the State, and representatives from 35 of the 54 counties were present. In June, 1918, a short course for country girls was held. Forty-two girls, representing as many counties, were present. Since there are only 54 counties in the State, these girls have been the means of reaching communities in every section of the State. In September, 1918, a college for women in war work, called the War Work College for Women, was held here at the same time with the meeting of the home demonstration agents.

From Tampa comes the following opinion:

> The war, particularly through the establishment of the Food Administration, with the consequent regulations, has added a big element of interest to all home economics instruction, and has generally increased the respect and esteem of the public in general for the work.

University of Washington:

> Practically all home economics courses were modified to meet war needs. Specific courses are:
>
> 1. Conservation of food.
> 2. Making over of clothing.
> 3. Remodeling of hats.
> 4. Food service. (This course is given for men from the naval training camp located on the campus.)
> 5. Nursing. (This is given to the hospital corps of the Navy.)
>
> A course for nurses' aids was given to 98 students, in which the home economics department cooperated.
>
> A five-credit course in food conservation was given in the spring of 1918 throughout one-quarter to 130 senior women who were not majors in home economics. One quarter of the year 1917–18 was devoted to the remodeling of garments in the dressmaking class.

In Minnesota the war has tended to increase the interest in certain lines of home economics instruction and to divert interest from other lines. Interest in work which leads directly to war work, as for example dietetics work, work as assistants in laboratories, and extension work, has been increased. The interest in general home economics where no vocation other than that of home making is involved has decreased slightly.

At the Oregon Agricultural College the following courses were organized and maintained:

> Food Administration course in "Food and the War," course of 4 lessons for fraternity cooks, and a course of 10 lessons for the housewives on food conservation.
>
> Regular courses in camp cookery and cookery for men who do their own housekeeping. Special course for those engaged in military training.
>
> Home economics department gave assistance in working out food conservation rules, to which all fraternities, boarding houses, etc., voluntarily subscribed.

Miss Marlatt, of the University of Wisconsin, states:

> The effect of the war upon the interest in home economics can not be measured. Owing to the emergency home demonstration agents, the training of volunteer classes and the work of the Junior Red Cross, the interest in home economics teaching has been very greatly stimulated.

The College of the City of New York offered extension courses in "Food in War Time." This was much similar to ordinary lecture courses on foods and nutrition, except that all food facts were related to war conditions. Among those who presented these courses were Miss Laura Cauble, Mr. Robert McDowell Allen, Dr. Lucius P. Brown, Dr. H. C. Sherman, and Miss Mary G. McCormick.

PRACTICE HOMES.

That the necessity existed of more closely alining home economics teaching with actual home conditions has been recognized for many years. Various methods have been attempted to attain this result, the most promising of which has been the use of an ordinary residence or apartment as a practice home.

It has been difficult to convince college and university authorities that a practice home was an essential feature of home economics equipment, so long have they thought of college work being carried on in laboratories.

Of recent years there has been an increased tendency to provide practice homes for senior students in colleges, and these have also been furnished by some school boards or philanthropic agencies in certain progressive cities.

The requirement by the Federal Board of Vocational Education that institutions receiving teacher training money should establish these practice homes caused an increased interest in them, as the following reports indicate:

At Lewis Institute, Chicago, the course in household management was much improved by the addition of a practice apartment. This was built of wall-board in the corner of the institute attic, but the classes, with paint brushes and needles, transformed it into a home-like place where activities of all kinds take place; even classes of children come in to be taught "home making" by the practic teachers in the senior class.

At Ohio State University the department of home economics moved into a large, new, commodious building in September, 1916. This gave the opportunity for further development. A practice house in connection with the household management course will be established in an apartment in the building this year.

A practice home has been in use at the University of Missouri since June, 1918. The students remain in the home from 8 to 16 weeks, and there are from 7 to 9 girls living in it at a time. An additional practice home was opened at Cornell University in 1917; the first one has been in existence four years.

In the Kansas State Agricultural College a house has been leased by the department of domestic science, which will accommodate 14 students and a teacher. This house is to serve as a laboratory for the teaching of household management to students who wish to qualify to teach home economics under the requirements of the Smith-Hughes Act. The work of the home is to be done under the supervision of the teacher, by the students. The length of time for each group is not definitely determined, but will probably be one semester. Cost of maintenance to be prorated among the students.

At the Florida State College for Women they have established a practice house. All graduates live in the cottage for a minimum of eight weeks during the year. The girls live in groups of six at a time. Poultry and gardening are carried on by the practice house family. The work is under the supervision of the regular instructor, Miss Lucy Kimball. The expenses of the cottage last year did not exceed 30 cents per person per day, exclusive of rent.

Temple University, in Philadelphia, will use the university dormitories in lieu of a practice house until it is deemed advisable to establish a separate residence for this practice work.

Milwaukee-Downer also uses the dormitories in place of a separate practice house.

A practice house will this year be established at New Hampshire Agricultural College and one will also be established at the Connecticut Agricultural College.

The University of Nevada enjoyed the use of the president's house as a practice house.

The Agricultural College of Oklahoma will have a practice house this fall.

The home of the president of Lincoln College, Lincoln, Ill., will be hereafter used as a practice house.

At the Oregon Agricultural College a practice house was established in September, 1916. It is entirely self-supporting. It houses 11 girls and 1 faculty woman.

A new practice house has been given to the University of Indiana.

A practice apartment was in use in 1917-18 at the University of South Dakota, and this arrangement will continue until the State appropriates money for a practice house.

A friend of Hood College, at Frederick, Md., made a liberal donation for a practice house for the home economics women of that school. This is the first practice house in Maryland and marks an epoch in the teaching of home economics in the State. The home is modern in every respect, is comfortably furnished and affords an opportunity for all senior home economics students to have actual experience in the operation of a home.

The practice house at the University of Wisconsin has been organized since 1910. This year they report as follows:

> We are now erecting a model farm house which will be used as a practice laboratory in the course in dietetics and household management so that we will be able to give longer periods in the cottage to the students in the household management courses.

Oxford College, Oxford, Ohio, has maintained a practice cottage for some years.

Pratt Institute has long maintained a house in which students can try out the principles of household administration.

In connection with the practice house at the Mississippi Industrial Institute and College at Columbus, there was a practical home dairy. A cow was kept to supply needed milk and to give an opportunity to teach the proper care and handling of milk. Cream was secured from the local creamery, and each girl had experience in making 20 pounds of butter.

PRACTICAL APPLICATION OF FOOD COURSES IN THE MANAGEMENT OF LUNCH ROOMS AND CAFETERIAS, AND IN COOPERATING WITH THE FRATERNITIES, DORMITORIES, AND BOARDING HOUSES.

Simmons College reports as follows:

> We have excellent cooperation between the teaching staff and the dormitory administration. Our house superintendent is a member of the faculty and in charge of all work in institutional management. Our policy continues to be to admit for institutional work only mature women.

In the Florida State College for Women the dormitory is in charge of a trained dietitian who is a member of the faculty of the school of home economics doing some teaching in nutrition.

Agricultural College of Washington states:

> Through our division of institutional management the student halls are operated under the direction of the college of home economics. The fraternity houses gave active cooperation and have frequent meetings of their house managers with the head of the division of institutional management. Most of the sorority houses are now being operated indirectly by students who are house

members and who have elected that course of study. This last year we have established a cafeteria. The head of the division of institutional management is also in charge of the special mess for the soldiers camp now stationed at the State college.

The home economics department of the Ohio State University reports that several seniors who registered in proseminary course have cooperated with boarding houses, fraternity houses, and sorority houses, in managing the food, as well as the complete budget. A large manufacturing plant asked for assistance in reorganizing their welfare lunchroom. This was worked out, and a trained worker placed in charge. The lunchroom will be used as a laboratory to some extent for students taking institutional work.

It is with the idea to develop greater cooperation between the department and the college cafeteria and fraternity and sorority houses at the agricultural college of Utah that two new members of the staff have been chosen for their experience in cafeteria and institutional work and a complete and up-to-date kitchen for training students in cafeteria and institutional management has been installed.

During the past year a woman for institutional work has been added to the faculty of the home economics department in the Ohio State University, and a course will be developed with laboratory work in a new cafeteria.

In the *Kansas State Agricultural College* the institutional work has greatly developed during the biennium. The cafeteria, which was equipped and opened in 1915 for the purpose of feeding the students and serving as a laboratory to teach institutional management, has been highly successful. It has paid all expenses, including director's salary, and has had a balance to apply toward additional equipment. Strong courses in institutional management and institutional cookery have been developed. A lunchroom management course of one year has been added.

The home economics department of the *University of Washington* has complete charge of the commissary department and the housekeeping of the dormitories, which accommodate 100 students. Frequent advice and help is asked for and given to the fraternity and sorority houses. A university commons is housed in the home economics building and is an activity of that department. It affords opportunity for practice work for students in institutional management.

The department is called upon to act in an advisory capacity in the management of fraternity houses.

During the year 1917-18 the department of home economics in the *Agricultural College of Colorado* operated a college-girls' boarding club in which 30 students were served, at a flat rate of $16 per month. This amount covered not alone cost of materials but rental, heating and lighting of the house, service, breakage and depreciation of 10 per cent in furniture and furnishings. In addition there were supplied to the resident and faculty members and the working housekeeper their rooms. Canned fruits, jellies, jams, and relishes were supplied to the club at cost of raw material. The department of home economics found this to be a very practical and helpful demonstration in house management.

At the *University of Wisconsin* the director of the university commons and her assistants are members of the home economics department. Practically all the sororities have a home economics student as their steward. The fraternities have occasionally asked help in the selection and buying of food.

At *Milwaukee-Downer* most of the practical cookery work is done for the college dormitories or cafeteria. All students of the college home economics department are given opportunity to work in the college cafeteria.

At the *University of California* conferences are held by the head of the home economics division each term with the Pan-Hellenic body, made up of club managers, and with the approved boarding-house keepers. There is no official machinery, however, connecting the division with any eating places. It is proposed during the coming term to place the student cafeteria on the campus in charge of a committee of women students under the leadership of a graduate of the division, who shall be given the management of the cafeteria as an economic problem for credit. It is believed that the running of such an establishment offers degree credit field only for one student at a time.

At *De Pauw University* the home economics department and dormitory system are very closely related, in that the head of the department who does part-time teaching is also director of the three halls, which include the housekeeping, boarding, planning of meals, buying, mangement of employees, records, etc. In other words, home economics principles are being carried out in the college dormitories, and the plan has been quite successful.

In *Lewis Institute* the institutional management classes were benefited by the installation of a small bakery and laundry. These served the double purpose of supplying the lunch rooms, dormitories, etc., with baked products and clean linen, respectively, and in giving these classes extra experience in their chosen field.

The arrival of a training detachment of 360 soldiers at Lewis Institute turned the gymnasium into a mess hall; the cafeteria kitchen adjoining was quickly augmented with extra equipment and more employees, and most of the institutional students took an active part in assisting in the work and management. The summer school has given a "canteen course" with practice work here and in the lunch rooms. New ranges, mixing machines, vegetable peeler, etc., have been material helpers and have given these classes experience in their manipulation and uses.

The *Temple University* lunch room has been placed under the supervision of the household arts department: (1) Some service hired; (2) some cookery and all management, and some waitress duties, done by pupils under supervision of instructor.

The results of first year's operation in cost are: All costs clear including rental of space, provision for depreciation, of equipment gas, etc. Salary of instructor not included, as this is considered legitimate instruction cost.

There has been greater opportunity given for practice teaching with work more closely supervised, and lunch room management course has been introduced.

SMITH-LEVER EXTENSION WORK.

The Secretary of Agriculture has expressed the opinion that the extension service rendered under the Smith-Lever Act is the largest educational work in the United States.

New phases of extension teaching in *Ohio:*

Home demonstration work established September, 1917. Now have 12 county agents and 7 city agents.

Teaching by means of illustrated lecture and demonstration from an automobile which toured part of the State in the interest of poultry and egg production.

Regular members of extension force assigned to Chautauqua tours to give food conservation demonstrations.

Demonstrations in homes of foreigners, often non-English-speaking, is a form of teaching done by urban home demonstration agents.

Teaching food facts by means of games or playlets is a method newly tried by urban agents in work with large groups of school children.

The exhibit method of teaching has been used by home demonstration agents.

The teaching of the extension service of the home economics department has been considerably extended by the enlistment of home economics trained people all over the State who signify their willingness to give talks and demonstrations in their communities. They give their service, and the people for whom the demonstration is given pay expenses of supplies used.

In *Nebraska* the county home demonstration agents are placed on a permanent basis, each county paying one-half of the total expense. The first work of each agent is to establish a county homemakers' association comprised of a number of local associations sufficient to reach all of the women in the county. These local associations meet monthly and during the first year the agent meets with them or trains leaders for such meetings as she can not attend in person. During the past year the conservation of food has been the main topic, with some attention devoted to clothing conservation. Great interest has been displayed in food values. The county food administrators of the State are very ardent supporters of home demonstration agents because they find that in those counties where there are home demonstration agents the spirit of the women and their attitude toward food conservation is much better than in those counties where they have no such agents. A large number of volunteer demonstrators have been trained the past year by the agents for the purpose of giving sugar and wheat conservation demonstrations. Training classes for volunteer workers are usually held in domestic science laboratories and are conducted for from one to three days. These demonstrators cooperate with the food administrators and with the women's committees of the county councils of defense, giving demonstrations before organized groups and at the grocery stores.

Another piece of extension work has been the giving of instructions in canning, drying, and egg preservation. In 1917, 2,040 volunteer demonstrators were trained at 25 two-day canning schools. These schools were held in 33 of the larger towns, utilizing domestic science laboratories in high schools. They were conducted by members of the staff of the home economics department of the College of Agriculture. Two of these schools, with a total attendance of 350, were held at the University of Nebraska for the special benefit of the students of the arts college. In 1918 a particular effort was made to reach the rural districts and the more sparsely settled portions of the State. During this season 479 demonstrations have been held by representatives of the extension and home economics department in the 70 counties not reached by home demonstration agents.

The past year has marked the beginning of city home demonstration work. In the city of Omaha the agent has appointed a chairman for every school district and these chairmen have in turn divided their districts into smaller units, appointing a representative in each unit. These unit representatives are agencies for the distribution of literature, for the advertising of meetings, and for the carrying on of the supervision of projects in their respective units. In the city of Lincoln the home demonstration agent has been the only agency attempting to reach the foreign population in the teaching of the use of substitutes. This she has accomplished by training volunteer workers and by utilizing volunteer demonstrators residing in the city who have had college training in home economics. The municipal canning kitchen established in Lincoln in June, 1918, has been very successful and very well received.

New phases of extension teaching in home economics in *Wisconsin* have been brought about through the work of the emergency home demonstration agents. In this State the leader has inaugurated a method of training mature housewives as volunteer teachers in the newer use of the war breads. This group of women in the town were first taught methods and trained members to do demonstrations. They then called meetings and trained members of the ward or block in methods of making war breads. They also organized the townships and rural school districts, going out in automobile squads to do the work throughout the county. These workers cooperated with the emergency home demonstration agents wherever there was one located in the county.

Texas Agricultural College, which does not offer courses in home economics, reports the following concerning the extension service:

> Through our 50 county home demonstration agents, 10 urban agents, and 8 negro home demonstration agents, we have done work in all lines of food preservation and food conservation. I can not give a complete summary of this work until after November 1, when our annual report is made.

The *Agricultural College of Utah* sends in the following report:

> With respect to new phases of work in our extension division the following are noted as the most important:
>
> The appointment of 10 new home demonstrators, and the connection of all such home economic workers with the community centers.
>
> A great increase in the work in urban districts. For example, two cities of over 25,000 have appointed demonstrators, and all the larger towns are organizing community centers, where not alone are demonstrations given in war cookery and dress economics, but in the right care of child life.
>
> A very valuable bulletin was issued from the university in the spring on the care of infants, and one on the care of childhood and adolescence is now in the printer's hands.
>
> The formation of the family type of farm bureaus all through the State.
>
> The organization of local women into training classes under trained supervision.
>
> These will serve to demonstrate the effect of the war upon the interests in home economics instruction.

In *Minnesota* the placing of home demonstration agents in the State was a new development of the extension teaching in home economics.

The *University of Wisconsin* offered an extension course for home economics workers which is described as follows:

> A lecture and laboratory course dealing with the field of extension teaching; discussions on the organization of material and problems of cooperation, combined with laboratory practice in preparation of material for exhibits; lectures and demonstrations form a part of the course.

NEW PHASES OF HOME ECONOMICS.

There has come a broader vision of what home economics may mean among those who have the organization and administration of home economics departments.

At the *University of the State of Washington* this new work was inaugurated:

> In 1917–18 a nurses course was added. It is now provided that students may take three years at the university followed by two years in a nurses training school and graduate at the end of five years as a registered nurse with a bachelor of science degree. The training course must be approved by the university faculty.

In the *Agricultural College of Colorado:*

> Beginning with July 1, 1917, a budget was set aside for the initiation of experiment station work in home economics. The total allowance for the two

years beginning July 1, 1917, is $3,500. This is to provide for salary, equipment of experimental laboratory, and supplies. In addition to that procured out of the budget named, some equipment has been loaned by other departments. Projects outlined include experimental cookery and research.

From the *University of Nebraska* it is reported that:

> During 1917–18 the cadetting in the Lincoln schools of the students in the special methods course was developed under the joint supervision of a member of the staff of the home economics department of the university and the city supervisor. The usual difficulties were encountered, but their recognition has led to the formulation of a plan of cooperation which it is believed will be workable. This plan will be put in operation under the direction of an assistant professor in the university in charge of home economics education.

University of Wisconsin:

No better illustration of the new trend of home economics can be found than the following excerpt from the report of the home economics department of the University of Wisconsin:

> The need for the best trained people that can be secured for the nursing service was recognized by the State legislature in its special session last February, at which time they passed a bill granting at least nine months' credit to college graduates who had taken approved laboratory courses during their college work. Detailed courses in biology and especially in home economics are recognized in the understanding of the law. The first group of university graduates began their work July 1, 1918. The university courses in home economics and medicine are cooperating in this work, so that the time required for fulfilling the requirements for the degrees of registered nurse will be made as short as possible. The preliminary courses especially designed for this course are those required in the general course in home economics.
>
> To the student who elects this major the opportunity will be given to complete the requirements for the bachelor of science degree and acquire the nurse's certificate in less than the four college and two hospital years. This can be done by the student taking summer school work in addition to the regular work in the university year. With the regulation age limit for those entering the nursing profession this will allow the high-school girl to enter the university and prepare herself for the work of hospital nurse, public health nurse, social welfare nurse, or industrial nurse at practically the same age as she would have done if she had entered the three-year nursing course after graduating from the high school and reaching the age of 19.

A five-year nurses' course will be given at *Ohio State University*, and will parallel closely the first three years of the curriculum in home economics.

> The *University of Iowa* will offer an intensive training course for women to become nurses on much the same plan as Vassar, except that the Iowa training course will be open also for the training of women who have had only two or three years of college work. The Red Cross has approved the program, and Mrs. Blodgett, who recently visited Iowa City, representing the Vassar camp, was enthusiastic over it. There is a prospect that the overflow from Vassar may be sent to Iowa. In Iowa there will be the advantage of the finest hospitals and equipment of the University School of Medicine, which, it will be remembered, ranks A by the standards of the American Medical Association.

At *Sioux Falls College* courses in food conservation were offered to men students and were appreciated by them.

In the *University of Nebraska* itinerant teacher training was begun in 1918, and 29 schools were visited. The work was largely in the nature of a survey, with the aim of determining what assistance could be given in developing home economics courses. A great variety in the time and content of courses and the adequacy of equipment was found. The attitude of both superintendent and teachers proved the value of this work, and it will be expanded in the future.

In *Mills College, California*, the course in house sanitation has been turned over to the physics department and will be called applied physics. A new course in weaving on a hand loom is now offered in order to train women as teachers in reconstruction work among the soldiers.

The *University of Wisconsin* offers the following among a number of new courses in the home economics department:

Reconstruction course. I; 5 cr. Teacher training course in hand crafts used in reconstruction camps, sanitariums, and hospitals.

(*a*) *Applied design.* 3 cr. Designs suitable to the special hand crafts to be taught. Lectures M..W. 11. Laboratory M. W. 8–10.

(*b*) *Hand crafts.* 2 cr. Practical problems in dyeing, netting, knitting, weaving, setting up a hand loom, pattern weaves, all-over hand border patterns; use of knitting machines and other craft appliances. Laboratory 8–10 F. S. 1:30–3:30 F.

At the *University of Indiana* a new graduate course was given in the care, management, and training of children below school age. One also on women and children in industry was offered.

The home economics department of the *Oregon Agricultural College* has these divisions: Household science, household art, and household administration. There is also an advanced course in textiles and a survey course in home economics. Institutional management which involves the managing of a boarding house which will accommodate 50 people is also organized.

In the *University of Minnesota* a course in commercial clothing manufacture was established last year. This course deals with the trade point of view in clothing construction problems. It is not a trade course, however, but is designed for those specializing in textiles and clothing work to increase speed and skill, to give insight into some of the economic problems of dressmaking work.

At the University of Minnesota a project work of "follow-up" teaching or training of teachers in service was carried out and will be continued this year. This work was done with the graduates of the previous year who were teaching in the State of Minnesota. The results have been of considerable moment with reference to assistance to young women in their teaching positions and help or the teacher training section through a clearer understanding of the problems n the State.

At *Pratt Institute*, in the summer of 1917, the school ran the mess for 120 signal service corps men in training, at the same time instructing 20 of the men as cooks. The lunchroom was used, with some separate lessons in the class kitchens. Summer work for students of Pratt Institute was changed so as to require the planning, purchasing, preparation, and serving of three meals a day for 14 consecutive days for a family of not less than four.

Simmons College reports:

> There is an increased desire on the part of students for greater specialization. This makes itself felt not so much by way of direct expression from the students as by the eagerness with which new specialized electives are chosen and the reluctance with which the conventional group of teaching electives is accepted. We now have fairly well organized groups of electives for vocations other than teaching, one leading to lunchroom or hospital work, one to extension work, and one to craft work with the handicapped. We are hoping to develop immediately work directed toward social service, such as the food work of children's clinics. Another field of work attractive to our home-economics students is public health work. Apparently our general home-economics training constitutes an excellent background for this work.

CHILD WELFARE COURSES.

The indications all point to a manifestation of interest in child welfare by the establishment of child welfare courses or lines of work in home economics divisions. Infant feeding has frequently been considered, but the feeding of the pre-school age child, the elementary school child, and the youth during the adolescent period has not been especially treated. Moreover, child welfare will not longer be interpreted to mean merely child feeding. Physical, mental, moral, and industrial welfare will hereafter be considered to be of equal interest.

Home economists will agree with the following statement from an address given by Miss Rita Oldham, president of the Association of Head Mistresses of England:

> Nevertheless, of all the contributions to civilization made by women they must set highest motherhood and the nurture of their own children, which the majority of women would desire and consider the first claim upon them during a part of their lives.
>
> What is the application? This: That in our schools the bulk of those they trained are consciously or unconsciously going forward to lives as wives and mothers. Is it not time that they set themselves to consider whether difference of function in the mass should not carry with it more differentiation of education than at present exists? Not for one moment should the education of women be inferior to that of men. But those who direct the education of girls should rid themselves of the idea from which some had already broken free, that the education of girls in the mass should be modeled upon or conditioned by that of boys.
>
> What they need now is a completely free and unprejudiced review of the whole ground in the light of the gathered experience of 50 years.

NEWLY-ESTABLISHED, REORGANIZED DEPARTMENTS, AND DEPARTMENTS IN WHICH THERE HAS BEEN UNUSUAL GROWTH.

The enrollment at Simpson College, Keokuk, Iowa, has doubled in the past two years, and new courses have been organized in applied design, household management, home nursing, and in demonstrations and practice teaching.

A department of home economics was established in Drury College in 1917.

Home economics course was established at the University of Alabama in 1917.

The University of Georgia organized a department of home economics in the college of agriculture in 1918.

Courses in textiles and clothing were first established at Fairmount College, Wichita, Kans., in 1917.

Mrs. Lizzie Merrill Palmer, the widow of Senator Palmer of Michigan, has bequeathed the residue of her estate amounting to approximately $2,000,000—

> for the founding, endowing, and maintenance in the City of Detroit or the township of Greenfield, of a school to be known as the Merrill-Palmer Motherhood and Home Training School, at which, under such plan and system and under such rules and regulations as shall, in the judgment and wisdom of those upon whom the administration of this estate shall devolve, be adopted, girls and young women of the age of 10 years and upwards shall be developed, educated, trained, and disciplined with special reference to training them mentally, morally, physically, and religiously for the discharge of the function of wifehood and motherhood and the management, supervision, and inspiration of the home.—Journal of Home Economics, Oct., 1916.

In 1918 the University of Wisconsin added 14 new courses in home economics to meet the requirements of the training of teachers in home making under the Smith-Hughes Act.

The Agricultural College of Utah reports that—

> The department is undergoing a process of reorganization; consequently it is more of plan rather than performance that can be reported, though the great success which attended the introduction of lecture courses last year on human efficiency and mothercraft vouches for the need they meet. Out of a total registration of 180 students in the whole department, 130 entered these courses in an institution where courses are entirely elective.
>
> The most successful establishment also of a practice house in October, 1917, calls for recognition. Thirty senior students and 12 high-school teachers passed through it during the nine months it was open. The former for periods of six weeks and the latter for selected periods of from two to three weeks, during which those who attended during the term had all their expenses paid by their school boards.

In the Connecticut Agricultural College the course of study has been very materially changed to provide for training of the young woman along various lines, first, to teach home economics in the public schools; second, to be extension workers; third and fourth, the col-ge offered courses in gardening for those who were to act as garden supervisors during the summer and also courses in war cooking and canning.

The Maryland Agricultural College advertises courses in home economics for the first time in the history of that institution.

The home economics department of the University of South Dakota was reorganized the second semester of last year, and courses in the practice house management, practice teaching, and a special course in home nursing were installed.

The department of home economics was established under that name in May, 1916, in the University of California. An adequate building to house the two divisions created at the same time—household art and household science—was erected immediately, and in use during the summer session of 1916.

The staff of household science has added to the two original assistant professors two instructors and one graduate assistant, and has in prospect another assistant professor or instructor.

The University of California offers the following:

> *Fifth year professional curricula.*—Four distinct professional fifth year requirements are contemplated:
>
> 1. The teacher's practice year, now in successful operation.
> 2. The hospital dietitian's practice year, so far not satisfactorily developed.
> 3. The extension worker's practice year; planned completely, begun in September, 1918.
> 4. The research student's training year, in successful operation.

The University of Tennessee reports as follows:

> In the fall of 1916 we began to require one year of high-school sewing for admission to our freshman class in elementary clothing and dress design, and one year of high-school cookery for admission to our sophomore class in tool production and service. For these students who have had no work in the high school we offer one semester noncredit course in sewing and cookery.
>
> The department was reorganized in 1916–17. Five four-year curricula are offered: 1. The teachers' curriculum. 2. The general curriculum. 3. Institutional management. 4. Food and nutrition. 5. Textile merchandising. The latter is to train students to fill executive positions in department stores, such as that of educational directors, welfare workers, personal service workers, etc. A large part of the work is given in the college of business administration, and opportunity is given for practice work in department stores under supervision. Thus an opportunity is given for an outlet for textile and clothing students such as has been provided for food students in institutional management.

Lincoln College, Lincoln, Ill., becomes a junior college and will hereafter place special stress upon the home economics courses.

The department of home economics at the University of Arizona was made into a school, and a similar recognition was given home economics in the Florida State College for Women, at which place the head of the department of home economics was made the dean of the school.

Delaware College for women has rearranged the curricul home economics and accepted the conditions imposed by the Hughes Act.

Kingfisher (Okla.) College organized home economics in 19 placed special stress on diets for children and invalids an care of the sick.

SURVEYS.

Home economics has been recognized as of special import being directly represented in several recent educational su the survey of the public school system of San Francisco; th of public education in the State of South Dakota; the Tenne cational survey; the survey of the schools of Elyria, Ohio; survey of the schools of Columbia, S. C.

In all of these survey reports home economics has been giv rate chapters or sections of chapters, thus enabling those i to announce certain principles and policies for the organiza administration of the courses in universities, colleges, normal and public elementary and secondary schools.

ORGANIZATION OF WOMEN INTERESTED IN HOME ECO EDUCATION.

So rapidly has interest in home economics grown that one tion has not been found adequate for the conferences needed b ers of this subject; hence State associations of home econon regional associations have been organized. These smaller o tions within States frequently meet with the State education ciation and have representation upon its general program.

In many of the larger cities, such as Philadelphia, New Y Chicago, there are strong city associations of home economic

Home economics teachers in land-grant colleges were perm organize a division of home economics in the college section American Association of Agricultural Colleges and Experime tions.

The American Home Economics Association holds an annu ing and also presents programs in connection with the Nation cation Association's annual meeting and with the Departn Superintendence of the National Education Association.

The Southern Home Economics Association has held one meeting at Macon, Ga., and a second meeting at Blue Ridge,

The Western Home Economics Association was organized a one meeting in Portland, Oreg., in July, 1917.

Conferences of supervisors of home economics in city schoo called by the Commissioner of Education and met in Portland and in New York City.

HOME ECONOMICS AND NATIONAL SERVICE.

Notable contributions to studies in the cost of living, of the dietary habits of American families, to instruction in food conservation, to propaganda for increased care of children, and to the problems relating to the effect of the war upon living conditions in congested sections of the cities have been made by home-economics women.

Many valuable leaflets, circulars, and bulletins relating to modifications of food preparations to meet war food conditions have been prepared by teachers of foods and nutrition.

Dietitians for the base hospitals in America and for the Army hospitals in France and Italy have been drawn from the ranks of home economics teachers.

Many home economics women have gone into the service as Y. M. C. A. canteen workers or as managers of the Y. W. C. A. hostess houses at Army camps.

Many other home economics women have also been called into Washington to aid in preparing material for publication by the American Red Cross Association, the Food Adminstration, and the Department of Agriculture.

Two honor sororities have been established in the colleges of the country, and through them certain studies of economic importance have been made for which there was no other organized agency.

A new field for home economics women is that of financial advisers of other women. Banks are finding that it pays to have their customers given expert advice in budget making.

LEGISLATION RELATING TO HOME ECONOMICS.

The most notable Federal legislation relating to home economics was that known as the Smith-Hughes Act, by which Federal money was appropriated to assist in the establishment and maintenance of vocational schools in industry, home economics, trade, and agriculture, and which further provided national aid for training teachers for these vocational schools.

This Federal legislation has made necessary further legislation by the legislatures of the various States whereby they have accepted the provisions of the bill and have made appropriations to match the Federal money granted.

The Smith-Hughes bill was signed by President Wilson February 23, 1917, and when a Federal board was appointed they organized and appointed a director, who in turn appointed an assistant director to be in charge of vocational home economics and the administration of that phase of work done under the board.

A complete and final interpretation of the law as it relates to home economics education has not, as yet, been pronounced.

An act of Congress which had important bearing upon
economics education was that which, through an emergency a
priation for the Department of Agriculture, made possible the
tenance of urban extension in home economics. Urban agents
been appointed in many cities.

These various recognitions of the need of more general intelli
relating to home making have greatly increased the deman
specially trained home economics women. The demand has exc
the supply.

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 51

STATISTICS OF STATE UNIVERSITIES AND STATE COLLEGES

FOR THE YEAR ENDED JUNE 30
1918

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STATISTICS OF STATE UNIVERSITIES AND STATE COLLEGES

For the Year Ended June 30, 1918.

This annual bulletin, formerly prepared and published by the National Association of State Universities, has been published by the Bureau of Education for the past 10 years. The data given are taken from reports received from the offices of the presidents of the various institutions, and the figures printed are substantially as given in those reports.

Directory of State universities and State colleges.[1]

[Names in *italics* are institutions endowed by the Federal Government under the Morrill Acts.]

Location.	Name.	President.
Auburn, Ala	*Alabama Polytechnic Institute*	Charles C. Thach, LL. D.
Montevallo, Ala	Alabama Girls Technical Institute	T. W. Palmer.
University, Ala	University of Alabama	George H. Denny, LL. D.
Tucson, Ariz	*University of Arizona*	R. B. von Klein Smid, A. M.
Fayetteville, Ark	*University of Arkansas*	John C. Futrall, A. M.
Berkeley, Cal	*University of California*	Benj. Ide Wheeler, LL. D.
Boulder, Colo	University of Colorado	George Norlin, Ph. D.
Fort Collins, Colo	*Colorado Agricultural College*	Chas. A. Lory, LL. D.
Golden, Colo	Colorado School of Mines	Victor C. Alderson, Sc. D.
Greeley, Colo	Colorado State Teachers College	John G. Crabbe, Ph. D.
Storrs, Conn	*Connecticut Agricultural College*	Charles L. Beach, B. S.
Newark, Del	*Delaware College*	Samuel C. Mitchell, Ph. D.
Gainesville, Fla	*University of Florida*	Albert A. Murphree, LL. D.
Tallahassee, Fla	Florida State College for Women	Edward Conradi, Ph. D.
Athens, Ga	*University of Georgia*	David C. Barrow, LL. D., chancellor.
Atlanta, Ga	Georgia School of Technology	Kenneth G. Matheson, LL. D.
Dahlonega, Ga	North Georgia Agricultural College	Gustavus R. Glenn, LL. D.
Honolulu, Hawaii	*College of Hawaii*	Arthur L. Dean, Ph. D.
Moscow, Idaho	*University of Idaho*	Ernest H. Lindley, Ph. D.
Pocatello, Idaho	Idaho Technical Institute[2]	N. B. Adkinson, acting.
Urbana, Ill	*University of Illinois*	Edmund J. James, LL. D.
Bloomington, Ind	Indiana University	William L. Bryan, LL. D.
La Fayette, Ind	*Purdue University*	Winthrop E. Stone, LL. D.
Ames, Iowa	*Iowa State College of Agriculture and Mechanic Arts.*	Raymond A. Pearson, LL. D.
Cedar Falls, Iowa	Iowa State Teachers College	Homer H. Seerley, LL. D.
Iowa City, Iowa	State University of Iowa	Walter A. Jessup, Ph. D.
Lawrence, Kans	University of Kansas	Frank Strong, LL. D.
Manhattan, Kans	*Kansas State Agricultural College*	William M. Jardine, LL. D.
Lexington, Ky	*University of Kentucky*	Frank L. McVey, Ph. D.
Baton Rouge, La	*Louisiana State University and Agricultural and Mechanical College.*	Thomas D. Boyd, LL. D.
Orono, Me	*University of Maine*	Robert J. Aley, LL. D.
College Park, Md	*Maryland State College of Agriculture*	Alfred F. Woods, D. Agri.
Amherst, Mass	*Massachusetts Agricultural College*	Kenyon L. Butterfield, LL. D.
Cambridge, Mass	*Massachusetts Institute of Technology*	Richard C. Maclaurin, LL. D.
Ann Arbor, Mich	University of Michigan	Harry B. Hutchins, LL. D.
East Lansing, Mich	*Michigan Agricultural College*	Frank S. Kedzie, Sc. D.
Houghton, Mich	Michigan College of Mines	Fred W. McNair, Sc. D.
Minneapolis, Minn	*University of Minnesota*	Marion Le Roy Burton, LL. D.
Agricultural College, Miss	*Mississippi Agricultural and Mechanical College.*	W. H. Smith, B. S.
Columbus, Miss	Mississippi Industrial Institute and College.	Henry L. Whitfield.

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[1] Corrected to March 5, 1919, in so far as changes have been reported to this bureau.
[2] Junior college.

Directory of State universities and State colleges.—Continued.

Location.	Name.	President.
University, Miss	University of Mississippi	Joseph N. Powers, chancellor.
Columbia, Mo	*University of Missouri*	Albert Ross Hill, LL. D.
Bozeman, Mont	*Montana College of Agriculture and Mechanic Arts.*	James M. Hamilton, M. S.
Butte, Mont	Montana State School of Mines	Charles H. Bowman, M. S.
Missoula, Mont	University of Montana	Edward O. Sisson, LL. D.
Lincoln, Nebr	*University of Nebraska*	Samuel Avery, LL. D., chancellor.
Reno, Nev	*University of Nevada*	Walter E. Clark, Ph. D.
Durham, N. H	*New Hampshire College of Agriculture and Mechanic Arts.*	Ralph D. Hetzel, LL. D.
New Brunswick, N. J	*Rutgers College*	Wm. H. S. Demarest, LL. D.
Albuquerque, N. Mex	University of New Mexico	David R. Boyd, Ph. D.
Socorro, N. Mex	New Mexico School of Mines	Fayette A. Jones, LL. D.
State College, N. Mex	*New Mexico College of Agriculture and Mechanic Arts.*	Austin D. Crile.
Albany, N. Y	New York State College for Teachers	Abraham R. Brubacher, Ph. D
Ithaca, N. Y	*Cornell University*	Jacob C. Schurman, LL. D.
Syracuse, N. Y	New York State College of Forestry (at Syracuse University).	Hugh P. Baker, M. F., dean.
Chapel Hill, N. C	University of North Carolina	
West Raleigh, N. C	*North Carolina College of Agriculture and Engineering.*	Wallace C. Riddick, C. E.
Agricultural College, N. Dak	*North Dakota Agricultural College*	Edwin F. Ladd, LL. D.
University, N. Dak	University of North Dakota	Thomas F. Kane, LL. D.
Athens, Ohio	Ohio University	Alston Ellis, LL. D.
Columbus, Ohio	*Ohio State University*	Wm. O. Thompson, LL. D.
Oxford, Ohio	Miami University	Raymond M. Hughes, M. S.
Chickasha, Okla	Oklahoma College for Women	G. W. Austin, B. S.
Norman, Okla	University of Oklahoma	Stratton D. Brooks, Ph. D.
Stillwater, Okla	*Oklahoma Agricultural and Mechanical College.*	James W. Cantwell, A. M.
Corvallis, Oreg	*Oregon State Agricultural College*	Wm. J. Kerr, Sc. D.
Eugene, Oreg	University of Oregon	Prince L. Campbell, A. B.
State College, Pa	*Pennsylvania State College*	Edwin E. Sparks, LL. D.
San Juan, P. R	*University of Porto Rico*	Paul G. Miller.
Kingston, R. I	*Rhode Island State College*	Howard Edwards, LL. D.
Charleston, S. C	The Citadel, the Military College of South Carolina.	O. J. Bond, A. M., supt.
Clemson College, S. C	*Clemson Agricultural College*	Walter M. Riggs, E. M. E.
Columbia, S. C	University of South Carolina	Wm. S. Currell, Ph. D.
Brookings, S. Dak	*South Dakota State College of Agriculture and Mechanic Arts.*	Ellwood C. Perisho, M. S.
Rapid City, S. Dak	South Dakota State School of Mines	Cleophas C. O'Harra, Ph. D.
Vermillion, S. Dak	University of South Dakota	Robert L. Slagle, Ph. D.
Knoxville, Tenn	*University of Tennessee*	
Austin, Tex	University of Texas	Robert E. Vinson, LL. D
College Station, Tex	*Agricultural and Mechanical College of Texas.*	Wm. B. Bizzell, D. C. L.
Denton, Tex	College of Industrial Arts	F. M. Bralley.
Logan, Utah	*Agricultural College of Utah*	Elmer G. Peterson, Ph. D.
Salt Lake City, Utah	University of Utah	John A. Widtsoe, LL. D.
Burlington, Vt	*University of Vermont and State Agricultural College.*	Guy P. Benton, LL. D.
Blacksburg, Va	*Virginia Polytechnic Institute*	Joseph D. Eggleston, A. M.
Charlottesville, Va	University of Virginia	Edwin A. Alderman, LL. D.
Lexington, Va	Virginia Military Institute	Edward W. Nichols, supt.
Williamsburg, Va	College of William and Mary	Lyon G. Tyler, LL. D.
Pullman, Wash	*State College of Washington*	Ernest O. Holland, Ph. D.
Seattle, Wash	University of Washington	Henry Suzzallo, Ph. D.
Morgantown, W. Va	*West Virginia University*	Frank B. Trotter, LL. D.
Madison, Wis	*University of Wisconsin*	Edward A. Birge, LL. D.
Laramie, Wyo	*University of Wyoming*	Aven Nelson, Ph. D.

TABLE 1.—The teaching force in State universities and State colleges.

Names of institutions.	Professors and instructors.			President's salary.	Maximum and minimum salaries.																House in addition to salary for—	
					Deans.		Professors.		Associate professors.		Assistant professors.		Adjunct professors.		Instructors.		Assistants.		Tutors and others.			
	Men.	Women.	Total.		Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	President.	Professors.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Alabama Polytechnic Institute	87	0	87	$5,000	$3,000	......	$2,400	$1,800	......	......	$1,800	$1,200	......	......	$1,200	$700	$700	$250	......	......	No.	0
Alabama Girls Technical Institute	3	33	36	4,000	1,350	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	No.	0
University of Alabama	81	1	82	5,658	3,200	$2,400	2,400	1,800	$1,800	$1,000	1,500	1,000	$1,200	$1,000	600	300	......	......	......	......	Yes.	0
University of Arizona	52	12	64	6,000	3,600	3,000	2,650	1,500	2,150	1,900	2,000	1,600	......	......	1,550	1,200	1,200	900	$2,000	$900	Yes.	0
University of Arkansas	115	21	136	5,000	3,250	3,000	2,500	600	1,500	1,000	1,800	1,500	......	......	1,500	400	950	600	......	......	No.	0
University of California	653	74	727	12,000	......	......	8,000	3,000	3,000	2,100	2,700	1,600	......	......	2,300	700	......	......	1,500	50	Yes.	3
University of Colorado	180	29	209	7,500	4,200	3,200	3,200	1,800	......	......	1,800	1,400	......	......	1,200	800	800	400	400	100	Yes.	0
Colorado Agricultural College	81	31	112	5,000	3,000	......	3,000	2,000	1,800	1,600	1,500	1,300	......	......	1,200	100	900	......	......	......	Yes.	0
Colorado School of Mines	18	0	18	6,000	......	......	3,500	2,500	2,000	......	1,800	1,800	......	......	1,200	1,200	......	......	......	......	Yes.	0
Colorado State Teachers College	37	41	78	6,000	3,200	2,450	2,800	1,600	......	......	1,700	1,200	......	......	1,800	600	1,200	780	......	......	Yes.	0
Connecticut Agricultural College	20	5	25	4,500	3,000	......	2,500	2,000	......	......	1,800	1,500	......	......	1,600	600	......	......	......	......	No.	0
Delaware College	39	5	44	6,000	4,000	2,450	3,000	2,000	......	......	1,750	1,400	......	......	1,400	1,000	......	......	......	......	No.	0
University of Florida	62	3	65	4,200	4,000	2,200	2,200	1,800	......	......	1,800	1,400	......	......	1,200	600	400	100	......	......	No.	0
Florida State College for Women	13	27	40	4,000	2,200	......	2,000	1,800	......	......	1,600	1,400	......	......	1,000	700	......	......	......	......	No.	0
University of Georgia	81	0	81	6,000	......	......	3,200	2,000	1,800	1,800	......	......	1,500	1,500	1,200	1,000	......	......	600	100	Yes.	0
Georgia School of Technology	66	0	66	6,500	3,000	2,400	2,500	2,100	1,900	1,200	......	......	......	......	600	140	350	150	......	......	Yes.	5
North Georgia Agricultural College	13	1	14	2,500	1,700	......	1,600	......	1,200	......	......	......	......	......	720	......	......	......	......	......	No.	0
College of Hawaii	15	8	23	5,000	......	......	3,500	2,100	......	......	1,800	1,800	......	......	1,800	1,200	720	720	......	......	No.	0
University of Idaho	81	22	103	6,000	2,900	1,800	2,500	2,000	2,000	1,700	1,800	1,400	......	......	1,500	1,000	900	......	......	......	No.	0
Idaho Technical Institute	14	8	22	3,500	2,000	1,500	2,000	1,500	2,000	1,500	......	......	......	......	1,700	1,200	......	......	......	......	No.	0
University of Illinois	712	82	794	12,000	6,000	5,000	5,500	3,000	3,750	2,500	3,500	2,100	......	......	2,000	1,200	1,200	600	......	......	Yes.	0
Indiana University	175	31	206	7,500	5,000	3,300	3,400	2,200	2,300	1,800	1,900	1,200	......	......	1,300	700	800	50	900	200	No.	0
Purdue University (Ind.)	172	14	186	6,000	4,500	2,000	3,000	2,500	2,500	2,000	2,000	1,800	......	......	1,500	1,000	900	500	......	......	No.	0
Iowa State College of Agriculture and Mechanic Arts.	228	70	298	7,500	4,800	3,000	3,500	2,400	2,800	1,500	2,700	1,400	......	......	1,800	1,000	1,200	800	......	......	Yes.	6
Iowa State Teachers College	44	60	104	7,000	2,400	1,700	2,400	1,500	2,000	1,400	1,900	1,200	......	......	1,400	900	1,300	405	120	60	Yes.	0
State University of Iowa	218	42	260	10,000	5,000	1,200	5,000	......	2,750	2,250	3,000	1,500	......	......	2,500	......	1,600	......	......	......	Yes.	0
University of Kansas	190	53	243	6,000	4,000	3,500	3,500	2,200	2,200	1,700	1,700	1,200	......	......	1,200	600	600	300	......	......	Yes.	0
Kansas State Agricultural College	131	56	187	6,500	4,000	2,750	3,800	1,850	2,600	1,700	2,500	1,600	2,000	1,400	1,900	700	1,500	600	2,500	400	No.	0
University of Kentucky	84	16	100	8,500	6,200	2,350	3,000	1,200	1,700	1,200	1,500	1,200	......	......	1,300	500	......	......	350	......	No.	1

TABLE 1.—*The teaching force in State universities and State colleges*—Continued.

Names of institutions.	Professors and instructors.			President's salary.	Maximum and minimum salaries.																House in addition to salary for—	
					Deans.		Professors.		Associate professors.		Assistant professors.		Adjunct professors.		Instructors		Assistants.		Tutors and others.			
	Men.	Women.	Total.		Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	President.	Professors.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Louisiana State University and Agricultural and Mechanical College.	65	13	78	5,000	4,000	2,200	2,500	1,600	......	......	......	......	1,800	1,200	1,350	600	300	300	2,400	600	Yes.	0
University of Maine	90	5	95	6,000	3,000	3,000	2,300	1,700	1,800	1,500	1,400	1,200	......	......	1,300	800	500	300	......	......	Yes.	0
Maryland State College of Agriculture.	42	0	42	10,000	3,000	1,800	2,400	1,500	2,000	1,500	1,800	1,200	......	......	1,500	1,200	......	......	......	......	No.	0
Massachusetts Agricultural College	72	2	74	7,500	4,200	3,500	3,600	2,500	2,500	2,000	2,000	1,600	......	......	1,600	1,200	1,200	840	600	420	Yes.	0
Massachusetts Institute of Technology.	231	3	234	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
University of Michigan	433	5	438	10,000	5,000	3,200	4,500	2,000	3,000	1,800	2,400	1,600	......	......	2,100	900	900	300	......	......	No.	0
Michigan Agricultural College	133	28	161	6,500	3,500	3,200	4,500	700	2,500	800	1,950	900	......	......	1,700	350	1,500	400	......	......	No.	8
Michigan College of Mines	21	0	21	5,000	......	......	3,000	2,250	2,100	......	1,700	1,500	......	......	1,500	900	......	......	......	......	No.	0
University of Minnesota	555	87	642	10,000	6,000	3,000	5,000	2,300	3,500	2,000	3,000	1,500	......	......	1,900	900	......	......	......	......	Yes.	
Mississippi Agricultural and Mechanical College.	82	3	85	3,500	2,750	2,250	2,000	1,800	1,500	1,500	1,400	1,000	......	......	1,100	720	......	......	600	240	Yes.	0
Mississippi Industrial Institute and College.	7	60	67	3,500	......	......	2,000	720	......	......	960	350	......	......	......	......	860	700	......	......	Yes.	1
University of Mississippi	31	1	32	3,500	3,000	2,000	2,000	2,000	2,000	1,200	1,500	1,200	......	......	1,200	......	300	150	......	......	Yes.	0
University of Missouri	212	12	224	9,000	4,500	3,600	3,600	2,400	2,400	1,800	2,200	1,500	......	......	1,600	900	1,000	100	300	100	Yes.	1
Montana College of Agriculture and Mechanic Arts.	59	22	81	4,500	4,000	2,500	3,600	2,000	......	......	2,000	1,600	......	......	1,600	1,200	600	450	......	......	No.	0
Montana State School of Mines	7	0	7	4,000	......	......	3,250	2,200	......	......	2,750	......	......	......	......	......	......	......	......	......	No.	1
University of Montana	46	10	56	5,000	3,300	2,100	3,000	2,100	......	......	2,000	1,200	......	......	1,400	1,000	......	......	......	......	No.	0
University of Nebraska	229	58	287	6,000	3,500	2,300	3,100	1,500	1,900	1,400	2,500	800	......	......	1,700	450	1,020	300	300	150	No.	0
University of Nevada	38	10	48	6,000	3,000	2,000	2,500	2,700	2,200	2,200	1,800	1,800	......	......	1,500	1,200	600	100	300	50	Yes.	0
New Hampshire College of Agriculture and Mechanic Arts.	65	8	73	5,000	2,800	......	2,600	1,800	2,000	1,700	1,000	1,200	......	......	1,600	1.00 50	,810	500	......	......	Yes.	0
Rutgers College (N. J.)	70	1	71	6,000		......	3,000	2,200	2,200	2,000	2,000	1,800	......	......	1,600	1,000	......	......	......	......	Yes.	0
University of New Mexico	20	4	24	4,500	2,100	......	2,100	1,800	1,700	1,000	900	......	......	......	......	......	300	100	......	......	No.	0
New Mexico School of Mines	8	0	8	3,000	......	......	2,000	1,200	......	......	......	......	......	......	400	......	......	......	......	......	No.	0

New Mexico College of Agriculture and Mechanic Arts.	33	7	40	4,500	2,600	2,250	2,250	1,800	......	......	1,800	1,400	......	......	1,300	1,200	......	......	......	......	Yes.	0
New York State College for Teachers.	32	25	57	6,000	4,500	1,950	3,250	2,750	......	......	2,150	1,750	......	......	1,900	1,000			1,800	800	Yes.	0
Cornell University (N. Y.).........	769	64	833	10,000	8,000	3,500	6,000	2,500	......	......	2,500	2,000	......	......	1,200	800	1,200	50	......	......	Yes.	2
New York State College of Forestry (at Syracuse University).	24	0	24	5,000	......	......	3,000	2,100	2,000	1,700	2,000	1,700	......	......	1,600	1,200	840	......	......	......	No.	0
University of North Carolina.........	93	0	93	6,000	3,250	2,500	3,000	2,500	2,000	1,750	1,650	1,500	......	......	1,450	800	500	50	......	......	Yes.	0
North Carolina College of Agriculture and Engineering.	60	0	60	4,500	3,000	......	2,500	500	1,800	1,350	1,600	1,200	......	......	1,800	500	250	75	......	......	No.	0
North Dakota Agricultural College..	50	22	72	5,000	3,600	2,600	2,600	1,700	2,100	1,700	1,800	1,600	......	......	1,600	1,080	250	50	......	......	No.	0
University of North Dakota.........	68	15	83	6,000	3,500	3,400	3,000	2,200	2,350	2,100	2,300	1,400	......	......	1,600	1,200	1,000	900	300	100	Yes.	0
Ohio University.....................	55	48	103	6,000	3,000	3,000	2,300	1,800	2,100	1,800	1,700	1,000	......	......	1,300	800	1,250	350	......	......	Yes.	0
Ohio State University..............	399	48	447	10,000	5,000	3,500	3,500	2,000	2,200	2,000	2,000	1,800	......	......	1,800	1,000	1,000	600	......	......	Yes.	0
Miami University (Ohio).............	50	24	74	5,500	3,200	3,000	2,500	2,000	2,000	1,600	1,800	1,300	2,300	1,500	1,325	900	300	100	......	......	No.	0
Oklahoma College for Women.......	5	28	33	4,500	2,500	......	1,800	......	1,200	......	1,000	......	......	......	......	......	......	......	......	......	Yes.	1
University of Oklahoma.............	168	22	190	7,500	3,000	2,100	2,700	1,800	2,400	1,800	1,700	1,400	......	......	1,300	1,000	900	450	......	......	No.	0
Oklahoma Agricultural and Mechanical College.	61	28	89	5,000	2,800	2,400	2,500	2,000	2,000	1,800	1,700	1,400	......	......	1,300	1,000	900	700	270	135	Yes.	0
Oregon State Agricultural College...	97	16	113	7,000	3,600	2,700	3,200	1,900	2,600	1,700	2.100	1,400	......	......	1,500	900	500	......	......	600	No.	0
University of Oregon................	120	22	142	5,000	3,000	2.500	2,500	1,600	......	......	1,500	1,400	......	......	......	......	1,200	100	......	......	Yes.	0
Pennsylvania State College.........	240	15	255	9,000	5,000	1,600	2,850	1,800	2,500	1,500	2,400	1,200	......	......	1,800	900	1,200	700	......	......	Yes.	5
University of Porto Rico............	42	27	69	......	3,500	3,000	2,500	1.800	......	......	1,700	1,500	......	......	1,400	300	450	225	......	......	......	
Rhode Island State College..........	21	7	28	4,500	2,500	2,400	2,400	1,800	......	......	1,800	1,500	......	......	1,500	900	......	......	......	......	No.	0
The Citadel, the Military College of South Carolina.	14	0	14	4,000	......	......	2,500	......	2,000	1,500	......	......	......	......	......	......	......	......	......	......	Yes.	0
Clemson Agricultural College (S. C.).	70	0	70	5,000	3,000	2,500	2,500	1,900	1,700	1.700	1,500	1,500	......	......	1,200	900	1,200	900	......	......	No.	0
University of South Carolina........	32	0	32	5,000	2,000	2,000	2,400	2,000	1,500	1,500	......	......	1,200	1,200	800	90	400	300	......	......	Yes.	22
South Dakota State College of Agriculture and Mechanic Arts.	43	18	61	4,200	3,000	......	3,000	1,300	2,200	1,700	2,000	1,700	......	......	1,400	375	1,400	720	......	......	No.	0
South Dakota State School of Mines.	12	1	13	3,000	......	......	1,900	......	......	......	......	......	......	......	1,400	......	......	......	......	......	No.	0
University of South Dakota..........	37	14	51	5,000	3,000	2,600	2,600	1,600	......	......	1,700	1,500	......	......	1,550	800	1,400	300	......	......	No.	0
University of Tennessee.............	200	18	218	5,700	3,200	2,500	2,700	2,000	1,800	1,600	1,500	1,200	......	......	1,500	900	800	125	......	......	Yes.	0
University of Texas..................	170	31	201	6,000	4,000	3,250	3,500	1,000	2,500	1,800	......	......	2,300	1,700	1,800	300	450	100	1,000	450	No.	0
Agricultural and Mechanical College of Texas.	105	0	105	6,000	3,300	3,000	3,000	1,800	2,000	1,650	1,700	1,200	......	......	1,500	1,000	1,000	200	......	......	Yes.	0
College of Industrial Arts (Tex.).....	13	68	81	5,500	2,750	2,000	2,000	1,800	2,000	1,400	1,800	1,200	......	......	1,500	1,000	......	......	......	......	Yes.	0
Agricultural College of Utah.........	67	19	86	5,500	3,600	2,800	3,000	1,800	2,750	300	2,100	1,600	......	......	2,000	1,000	1,700	200	......	......	No.	0
University of Utah...................	97	32	129	6,000	3,600	2,800	2,750	......	2,100	1,600	......	......	2,000	1,000	1,700	200	1,000	250	......	......	No.	0
University of Vermont and State Agricultural College.	100	4	104	7,000	3,000	3,000	2,700	2,300	......	......	1,800	1,800	......	......	1,800	800	600	300	......	......	Yes.	
Virginia Polytechnic Institute.......	55	0	55	5,000	2,800	2,200	2,000	1,700	1,750	1,200	......	......	......	......	1,500	800	250	250	250	120	Yes.	20
University of Virginia...............	98	0	98	8,000	......	......	3,300	2,500	2,450	1,450	......	......	2,450	900	1,000	300	850	100	250	100	Yes.	9
Virginia Military Institute..........	28	0	28	4,500	......	......	2,500	2,300	......	......	1,000	500	1,200	1,200	......	......	......	......	......	......	Yes.	10
College of William and Mary (Va.)..	13	0	13	3,000	2,100	......	2,000	1,800	......	......	1,600	......	......	......	1,200	......	135	......	......	......	Yes.	0
State College of Washington.........	114	20	134	8,000	3,300	2,100	3,150	2,200	2,200	1,800	1,800	1,400	......	......	1,500	1,000	900	500	......	......	Yes.	
University of Washington...........	184	33	217	10,000	3,000	2,400	3,000	2,200	2,400	1,800	2,000	1,200	......	......	1,800	1,100	1.000	450	900	150	Yes.	
West Virginia University...........	105	12	117	5,000	4,000	3,000	3,000	2,400	2,400	2,000	2,400	1,500	......	......	1,800	1,000	1,000	350	350	50	Yes.	0
University of Wisconsin............	380	76	456	7,000	5,250	3,500	5,000	2,850	3,500	2,250	3,500	1,650	......	......	1,900	750	1,100	400	500	150	Yes.	
University of Wyoming.............	36	16	52	5 000	3,000	......	2,400	2,000	2,000	1,800	1,600	1,400	......	......	1,300	500	960	500	600	100	Yes.	

TABLE 2.—*Student enrollment in State universities and State colleges.*

Names of institutions.	Regular term enrollment.													Enrolled in 1917 summer school.		Enrolled in other short courses.		Enrolled in professional departments.				Students in military drill.
	Preparatory department.¹		Collegiate department.		Graduate department.		Professional departments.		All other students.²		Total (excluding duplicates).											
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Total.	Men.	Women.	Men.	Women.	Law.	Medicine.	Dentistry.	Pharmacy.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Alabama Polytechnic Institute	......	......	563	12	9	0	64	0	144	0	780	12	792	200	348	......	......	0	0	0	20	638
Alabama Girls Technical Institute	0	125	0	366	0	0	0	0	0	0	0	491	491	0	295	0	124	0	0	0	0	0
University of Alabama	......	......	546	134	3	0	119	3	8	4	676	141	817	234	556	......	......	65	51	0	6	340
University of Arizona	......	......	217	195	10	20	......	......	8	27	235	242	477	......	......	121	137	0	0	0	0	115
University of Arkansas	34	42	318	247	1	3	0	0	17	10	352	289	641	42	160	139	0	0	0	0	0	202
University of California	......	......	2,737	3,255	238	510	463	46	......	......	3,438	3,811	7,249	868	3,111	......	......	96	102	166	87	1,430
University of Colorado	......	......	619	466	45	22	125	16	......	......	789	504	1,293	147	624	......	......	41	79	......	21	400
Colorado Agricultural College	256	97	293	210	......	......	33	0	43	132	549	307	856	13	23	......	......	0	0	0	0	217
Colorado School of Mines	......	......	163	1	......	......	......	......	......	......	163	1	164	......	......	......	......	0	0	0	0	......
Colorado State Teachers' College	125	385	101	1,623	24	44	......	......	50	532	226	2,008	2,234	83	900	......	......	0	0	0	0	100
Connecticut Agricultural College	49	6	112	25	0	0	0	0	0	0	161	31	192	0	0	......	......	0	0	0	0	161
Delaware College	......	......	216	120	......	......	......	......	0	3	216	120	336	25	256	......	......	0	0	0	0	157
University of Florida	36	0	259	0	5	0	46	0	......	......	346	0	346	139	294	150	0	48	0	0	0	192
Florida State College for Women	0	51	0	361	0	1	0	0	0	73	486	0	486	11	419	0	84	0	0	0	0	0
University of Georgia³	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	0	0	0	0	......
Georgia School of Technology	......	......	945	0	......	......	......	......	......	......	945	0	945	112	0	......	......	0	0	0	0	883
North Georgia Agricultural College³	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	0	0	0	0	......
College of Hawaii	......	......	45	14	0	2	......	......	20	59	65	75	140	......	......	......	......	0	0	0	0	......
University of Idaho	......	......	242	173	6	7	25	0	0	25	267	173	440	......	......	70	10	25	0	0	0	218
Idaho Technical Institute	112	61	13	35	0	0	0	0	5	26	125	96	221	0	0	0	0	0	0	0	0	50
University of Illinois	......	......	2,781	1,302	298	77	605	77	......	......	3,674	1,413	5,087	423	410	112	85	46	203	173	147	1,857
Indiana University	......	......	743	1,465	100	86	250	6	......	......	1,102	1,557	2,659	......	......	......	......	43	222	......	......	433
Purdue University (Ind.)	......	......	1,408	213	16	3	29	3	10	13	1,437	216	1,653	12	25	58	13	0	0	0	32	962
Iowa State College of Agriculture and Mechanic Arts	357	99	1,478	573	91	16	114	0	......	......	1,939	672	2,611	307	370	2,085	570	0	0	0	0	2,178
Iowa State Teachers' College	73	427	143	984	......	......	......	......	17	77	233	1,488	1,721	172	2,216	......	......	0	0	0	0	......
State University of Iowa	......	......	972	1,055	234	241	617	107	5	80	1,780	1,523	3,303	340	402	......	......	82	214	272	41	556
University of Kansas	......	......	1,053	815	42	45	286	38	41	76	1,328	1,018	2,346	312	431	......	......	112	170	0	42	660
Kansas State Agricultural College	143	57	799	634	25	11	64	0	41	97	1,072	799	1,871	153	328	254	60	0	0	0	0	888
University of Kentucky	......	......	410	236	12	6	53	2	20	20	495	264	759	27	52	48	0	55	0	0	0	552

Louisiana State University and Agricultural and Mechanical College[3]	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	386
University of Maine	......	......	645	228	7	2	34	0	......	......	685	228	913	42	50	......	......	34	0	0	0	500
Maryland State College of Agriculture	13	1	106	3	10	0	0	0	12	1	201	5	206	19	123	13	37	0	0	0	0	121
Massachusetts Agricultural College	......	......	388	24	28	1	0	0	54	8	470	33	503	12	78	84	6	0	0	0	0	292
Massachusetts Institute of Technology	......	......	1,565	16	32	0	......	......	18	3	1,615	19	1,634	630	0	......	......	0	0	0	0	1,300
University of Michigan	......	......	3,529	1,298	184	81	935	54	......	......	4,548	1,384	5,932	1,040	409	......	......	191	382	337	79	1,700
Michigan Agricultural College	......	......	724	354	8	1	53	0	......	......	785	355	1,140	96	110	356	0	0	0	0	0	750
Michigan College of Mines	......	......	69	0	......	......	......	......	......	......	69	0	69	......	......	......	......	0	0	0	0	......
University of Minnesota	813	355	1,868	1,833	221	106	820	124	......	......	3,722	2,418	6,140	193	449	......	......	144	296	240	77	1,661
Mississippi Agricultural and Mechanical College	69	0	808	0	12	0	0	0	94	0	983	0	983	64	311	58	0	0	0	0	0	983
Mississippi Industrial Institute and College[3]	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
University of Mississippi	......	......	209	52	3	0	111	2	34	18	357	72	429	58	114	......	......	39	58	0	16	200
University of Missouri[3]	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Montana College of Agriculture and Mechanic Arts	160	28	228	266	......	......	......	......	......	......	388	294	682	0	170	......	......	0	0	0	0	363
Montana State College of Mines	......	......	51	1	......	......	......	......	......	......	51	1	52	......	......	......	......	0	0	0	0	......
University of Montana	......	......	152	277	6	9	37	15	30	58	225	359	584	53	226	10	......	32	0	0	20	138
University of Nebraska	67	188	1,424	1,780	127	175	420	20	121	256	1,807	1,740	3,547	190	466	164	1	115	285	0	40	651
University of Nevada	......	......	151	162	3	8	......	......	......	......	154	170	324	14	87	17	0	0	0	0	0	109
New Hampshire College of Agriculture and Mechanic Arts	......	......	395	159	0	0	0	0	4	4	399	163	562	......	......	......	......	0	0	0	0	390
Rutgers College (N. J.)	72	0	451	0	10	0	0	0	0	0	533	0	533	88	407	2	76	0	0	0	0	325
University of New Mexico	7	4	78	99	......	......	0	0	26	31	111	134	245	......	......	......	......	0	0	0	0	......
New Mexico School of Mines	2	6	18	0	0	0	0	0	1	0	19	0	19	0	0	0	0	0	0	0	0	0
New Mexico College of Agriculture and Mechanic Arts	118	48	42	0	1	0	0	0	1	4	162	68	230	......	......	......	......	0	0	0	0	169
New York State College for Teachers	50	180	114	677	5	5	0	0	9	32	178	894	1,072	35	218	......	......	0	0	0	0	......
Cornell University (N. Y.)	......	......	2,622	749	226	52	454	57	......	......	3,302	858	4,160	417	908	151	39	193	210	0	0	1,760
New York State College of Forestry (at Syracuse University)	......	......	128	0	0	0	0	0	0	0	128	0	128	0	0	0	0	0	0	0	0	......
University of North Carolina	......	......	673	17	21	4	140	0	......	......	834	21	855	212	589	0	0	57	57	0	26	......
North Carolina College of Agriculture and Engineering	......	......	448	0	16	0	0	0	86	0	552	0	552	485	0	5	0	0	0	0	0	500
North Dakota Agricultural College	214	68	225	157	6	2	29	2	6	5	480	234	714	42	94	168	5	0	0	0	20	207
University of North Dakota	44	49	226	364	8	5	58	5	20	23	256	446	802	55	234	......	......	33	30	0	0	152
Ohio University	34	40	225	612	......	......	......	......	......	......	259	652	911	351	1,365	......	......	0	0	0	0	......
Ohio State University	......	......	2,545	1,392	106	55	523	28	......	......	3,074	1,422	4,496	403	483	119	0	80	161	143	81	1,625
Miami University (Ohio)	......	......	327	508	0	1	0	0	0	0	327	509	836	102	501	......	......	0	0	0	0	327
Oklahoma College for Women	......	......	0	102	0	0	0	0	0	19	0	121	121	0	0	0	0	0	0	0	0	......
University of Oklahoma	......	......	811	606	24	19	150	6	158	375	945	638	1,583	370	677	......	......	81	75	0	0	480
Oklahoma Agricultural and Mechanical College	283	302	309	189	5	2	0	0	21	26	618	519	1,137	90	305	117	3	0	0	0	0	714
Oregon State Agricultural College	44	27	875	648	17	3	35	19	80	73	971	697	1,668	96	268	969	452	......	......	......	54	971
University of Oregon	......	......	408	541	5	7	73	9	259	76	672	624	1,296	148	354	......	......	4	78	0	0	475
Pennsylvania State College	......	......	1,743	257	37	7	0	0	137	12	1,917	276	2,193	132	683	76	16	0	0	0	0	......

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[1] Including secondary schools. [2] Includes students in music, art, oratory, business, etc., unless they are enrolled in four-year courses leading to a collegiate degree. [3] No report.

TABLE 2.—*Student enrollment in State universities and State colleges*—Continued

Names of institutions.	Regular term enrollment.													Enrolled in 1917 summer school.		Enrolled in other short courses.		Enrolled in professional departments.				Students in military drill.
	Preparatory department.		Collegiate department.		Graduate department.		Professional departments.		All other students.		Total (excluding duplicates).											
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Total.	Men.	Women.	Men.	Women.	Law.	Medicine.	Dentistry.	Pharmacy.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
University of Porto Rico	114	13	76	0	0	0	0	0	0	0	190	13	203	27	106	......	......	0	0	0	0	175
Rhode Island State College	......	......	194	49	0	0	0	0	0	0	194	49	243	0	0	0	0	0	0	0	0	190
The Citadel, the Military College of South Carolina	......	......	330	0	0	0	0	0	0	0	330	0	330	0	0	0	0	0	0	0	0	330
Clemson Agricultural College (S. C.)	......	......	756	0	8	0	0	0	40	0	804	0	804	0	0	0	0	0	0	0	0	804
University of South Carolina	......	......	237	27	20	11	40	3	26	23	322	64	386	21	39	0	0	43	0	0	0	200
South Dakota State College of Agriculture and Mechanic Arts	230	85	174	137	5	0	15	4	14	43	438	269	707	69	136	66	7	0	0	0	19	308
South Dakota State School of Mines	30	1	43	3	0	0	0	0	16	12	89	16	105	0	0	0	0	0	0	0	0	0
University of South Dakota	......	......	117	183	2	4	88	4	16	22	228	276	504	34	88	......	......	39	53	0	0	......
University of Tennessee	......	......	397	247	7	3	175	4	......	......	579	254	833	324	966	91	0	39	90	44	5	357
University of Texas[1]	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Agricultural and Mechanical College of Texas	......	......	808	0	12	0	14	0	332	0	1,152	0	1,152	926	206	......	......	0	0	0	0	1,120
College of Industrial Arts (Texas)	0	116	0	886	0	0	0	0	0	245	0	1,247	1,247	0	686	0	0	0	0	0	0	......
Agricultural College of Utah	......	......	299	191	8	0	0	0	239	100	546	291	837	45	151	0	0	0	0	0	0	298
University of Utah	33	52	411	458	36	4	143	0	76	51	663	541	1,204	81	427	......	......	49	94	0	0	555
University of Vermont and State Agricultural College	......	......	295	179	2	2	105	0	2	6	404	187	591	30	201	18	0	0	105	0	0	220
Virginia Polytechnic Institute	......	......	449	0	8	0	0	0	63	0	519	0	519	35	22	52	1	0	0	0	0	511
University of Virginia	......	......	566	0	16	0	201	0	0	0	780	0	780	......	......	0	0	100	101	0	0	450
Virginia Military Institute	......	......	584	0	0	0	0	0	0	0	584	0	584	0	0	0	0	0	0	0	0	584
College of William and Mary (Va.)	9	0	140	0	0	0	0	0	0	0	149	0	149	67	0	0	0	0	0	0	0	133
State College of Washington	127	121	775	586	65	54	52	23	2	1	967	761	1,728	121	253	206	34	0	0	0	49	500
University of Washington	......	......	1,132	1,418	54	62	80	25	0	0	1,266	1,505	2,771	277	968	0	0	80	0	0	53	921
West Virginia University	......	......	546	312	19	15	79	6	13	83	653	333	986	142	359	5	0	32	34	0	19	487
University of Wisconsin	......	......	1,998	1,636	228	125	224	19	2	54	2,452	1,831	4,286	965	1,309	206	3	82	126	0	35	1,177
University of Wyoming	36	32	78	114	2	0	0	0	19	66	135	212	347	20	211	3	0	0	0	0	0	112

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[1] No report.

TABLE 3.—*Property and income of*

	Names of institutions.	Property.				
		Bound volumes in libraries.	Value of library, scientific apparatus, machinery, and furniture.	Value of grounds (including farm).	Value of buildings.	Endowment funds.
	1	2	3	4	5	6
1	Alabama Polytechnic Institute	33,550	$185,000	$10,000	$525,000	$284,500
2	Alabama Girls Technical Institute	9,500	25,000	6,000	400,000	307,884
3	University of Alabama	40,000	182,000	300,000	957,318	742,506
4	University of Arizona	28,000	145,692	190,950	653,500	10,500
5	University of Arkansas	30,000	270,000	75,000	390,000	132,666
6	University of California	376,353	2,845,893		11,400,891	5,490,430
7	University of Colorado	106,905	390,000	200,000	940,000	80,000
8	Colorado Agricultural College	40,000	258,825	470,000	498,955	202,755
9	Colorado School of Mines	15,000	275,332	83,914	455,009	
10	Colorado State Teachers College	51,000	126,868	170,000	452,000	
11	Connecticut Agricultural College	16,000	130,000	63,315	867,566	256,000
12	Delaware College [2]	26,000	204,129	400,000	819,000	286,000
13	University of Florida	32,500	97,000	185,000	426,000	
14	Florida State College for Women	10,000	70,000	85,000	355,000	
15	University of Georgia [2]	43,000	165,000	585,000	625,000	349,291
16	Georgia School of Technology	12,270	180,000	150,000	450,000	200,000
17	North Georgia Agricultural College	4,000	6,000	20,000	85,000	
18	College of Hawaii	23,933	133,719	126,116	70,499	
19	University of Idaho	42,000	203,693	60,000	628,712	1,500,000
20	Idaho Technical Institute	8,370	39,649	59,500	197,900	
21	University of Illinois	410,573	2,158,365	860,659	3,877,932	649,012
22	Indiana University	121,718	214,400	223,600	1,120,000	878,400
23	Purdue University (Ind.)	49,464	540,000	200,000	1,600,000	440,000
24	Iowa State College of Agriculture and Mechanic Arts.[2]	66,100	982,576	209,795	2,758,357	689,530
25	Iowa State Teachers College	51,000	218,600	42,055	1,000,000	
26	State University of Iowa	147,349	1,207,611	508,453	2,692,586	336,813
27	University of Kansas	120,109	500,000	500,000	1,250,000	
28	Kansas State Agricultural College	61,360	629,677	538,210	988,684	491,746
29	University of Kentucky	33,869	211,666	227,749	697,685	187,185
30	Louisiana State University and Agricultural and Mechanical College.[2]	38,454	219,443	177,341	573,790	318,713
31	University of Maine	56,000	238,015	11,000	712,347	252,050
32	Maryland State College of Agriculture	17,500	161,468	85,800	573,397	
33	Massachusetts Agricultural College	57,802	592,836	122,718	999,389	361,000
34	Massachusetts Institute of Technology	129,811	1,575,000	2,568,000	6,092,000	9,616,000
35	University of Michigan	401,005	2,412,858	791,462	4,493,591	1,326,412
36	Michigan Agricultural College	43,000	266,000	110,377	1,239,650	991,241
37	Michigan College of Mines	28,299	340,091	104,025	336,168	
38	University of Minnesota	289,110	2,060,912	2,656,420	6,090,417	1,785,570
39	Mississippi Agricultural and Mechanical College.	29,416	455,969	157,520	810,090	
40	Mississippi Industrial Institute and College.[2]	11,000	68,676	195,000	458,600	
41	University of Mississippi	31,000	110,000	20,000	465,000	700,000
42	University of Missouri [2]	211,814	1,193,670	801,385	1,987,470	1,309,339
43	Montana College of Agriculture and Mechanic Arts.	16,314	248,442	91,773	333,145	680,250
44	Montana State School of Mines	9,000	51,000		152,000	
45	University of Montana	42,000	134,790	120,000	220,100	
46	University of Nebraska	138,500	716,848	951,639	2,346,018	871,507
47	University of Nevada	31,000	236,887	415,298	230,970	330,554
48	New Hampshire College of Agriculture and Mechanic Arts.	35,000	40,000	87,000	520,000	950,000
49	Rutgers College (N. J.)	93,720	279,000	454,500	1,049,579	891,277
50	University of New Mexico	13,000	57,295	45,000	190,035	20,761
51	New Mexico School of Mines	2,220	22,713	8,000	75,000	
52	New Mexico College of Agriculture and Mechanic Arts.	18,323	200,000	30,000	100,000	
53	New York State College for Teachers	4,802	36,300	100,000	450,000	
54	Cornell University (N. Y.)	557,931	2,674,926	373,259	6,626,095	14,221,996
55	New York State College of Forestry (at Syracuse University).	3,500	138,000	10,000	280,000	
56	University of North Carolina	77,205	394,700	125,500	801,500	216,548

[1] Includes appropriations for experiment stations, farmers' institutes, and extension work.

State universities and State colleges.

Income from—							Analysis of State appropriations.				
Student fees, excluding board and room rent.	Productive funds.	The State.[1]	United States Government.	Private benefactions.	All other sources.	Total working income.	Mill tax rate.	Receipts from mill tax.	Appropriation for current expenses.[1]	For building and permanent improvements.	
7	8	9	10	11	12	13	14	15	16	17	
$13,242	$21,440	$102,445	$125,761	....	$18,795	$281,683	......	....	$102,445	....	1
....	18,473	36,000	0	....	....	54,473	......	....	36,000	....	2
43,346	65,453	60,000	0	$4,100	4,532	177,431	......	....	60,000	....	3
6,782	18,448	363,073	94,574	....	28,195	511,072	......	....	263,073	$100,000	4
15,709	6,183	219,539	120,839	....	6,204	368,474	......	....	219,539	....	5
280,215	226,316	2,225,419	119,433	240,461	641,142	3,732,986	......	....	1,979,058	246,361	6
54,000	4,000	330,000	0	0	40,000	488,000	$\frac{2}{5}$	$310,000	....	80,000	7
24,433	22,237	179,458	102,780	0	44,724	373,633	$\frac{1}{5}$	123,971	55,487	....	8
11,193	....	100,552	0	....	5,001	116,746	$\frac{1}{5}$	100,552	....	....	9
47,847	....	233,800	0	....	1,924	283,571	$\frac{3}{10}$	161,800	....	72,000	10
17,700	6,810	187,057	78,726	20,400	140,584	451,277	......	....	95,000	92,057	11
....	....	....	....	....	....	....	......	....	....	....	12
3,000	13,604	117,957	82,298	64,047	1,000	281,906	......	....	103,363	14,594	13
13,407	2,064	215,036	0	....	....	230,507	......	....	115,036	100,000	14
....	....	....	....	....	....	....	......	....	....	....	15
43,756	1,200	144,291	0	5,991	8,365	203,603	......	....	114,291	30,000	16
1,800	....	26,500	0	0	2,666	50,966	......	....	26,500	....	17
112	....	33,956	50,000	....	5,027	89,095	......	....	22,593	11,363	18
2,500	101,276	175,860	98,290	....	9,649	387,575	......	....	119,860	56,000	19
1,646	10,000	204,172	125	....	932	216,875	......	....	164,172	40,000	20
239,591	32,450	2,333,263	160,085	36,450	273,568	3,075,409	1	2,083,263	....	250,000	21
101,545	45,511	586,671	0	....	20,855	754,582	$\frac{28}{100}$	586,671	....	....	22
63,461	29,499	663,058	140,483	....	307,982	1,204,183	$\frac{28}{100}$	663,058	....	(3)	23
....	....	....	....	....	....	....	......	....	....	....	24
52,765	....	426,500	0	....	13,831	493,096	......	....	389,500	37,000	25
118,312	22,904	1,199,916	0	....	381,462	1,722,594	......	....	924,916	275,000	26
89,024	7,541	762,000	0	....	62,295	920,860	......	....	649,500	112,500	27
58,122	24,877	698,316	128,814	....	301,864	1,211,993	......	....	618,316	80,000	28
16,589	10,644	253,718	139,030	3,000	204,266	627,247	$\frac{1}{20}$	53,632	200,086	....	29
....	....	....	....	....	....	....	......	....	....	....	30
57,252	9,915	149,202	101,702	....	57,058	375,129	......	....	149,202	....	31
7,000	6,543	275,658	110,658	....	16,265	416,124	......	....	101,658	174,000	32
10,363	10,613	430,983	79,927	....	119,229	651,115	......	....	364,500	66,483	33
409,000	312,000	100,000	22,000	550,000	460,000	1,853,000	......	....	100,000	....	34
427,870	77,666	1,294,000	0	292,718	555,579	2,647,833	$\frac{3}{8}$	1,190,000	9,000	95,000	35
38,418	70,539	561,000	138,086	....	196,717	1,004,760	$\frac{1}{4}$	560,000	1,000	(3)	36
7,934	....	72,700	0	....	4,324	84,958	......	....	72,700	....	37
271,322	58,052	1,902,586	129,731	....	442,012	2,803,703	$\frac{23}{100}$	369,214	1,408,122	125,250	38
16,650	14,387	195,494	114,276	....	204,514	545,321	......	....	180,494	15,000	39
....	....	....	....	....	....	....	......	....	....	....	40
26,774	42,000	45,688	0	3,000	....	117,462	......	....	45,688	....	41
....	....	....	....	....	....	....	......	....	....	....	42
10,869	35,000	262,407	97,866	....	20,793	426,935	......	....	212,407	50,000	43
984	....	38,500	0	....	....	39,484	......	....	38,500	....	44
15,092	....	290,000	0	....	....	305,092	......	....	220,000	70,000	45
92,670	57,007	1,188,007	118,576	....	261,442	1,717,702	1	490,385	248,828	448,794	46
1,904	15,283	145,034	92,221	....	19,833	274,275	$\frac{4}{5}$	129,379	15,655	....	47
17,067	39,865	109,075	115,574	125	65,642	347,348	......	....	59,075	50,000	48
36,004	44,612	114,949	110,425	152,419	....	458,409	......	....	114,949	....	49
2,821	26,527	88,192	0	....	4,729	122,269	......	....	68,192	20,000	50
970	22,255	22,000	0	....	428	45,653	......	....	22,000	....	51
1,222	....	142,601	99,102	131	37,469	280,525	......	....	119,606	22,995	52
9,089	....	149,658	....	....	....	158,747	......	....	148,158	1,500	53
519,015	712,780	825,944	333,386	111,863	339,276	2,842,264	......	....	743,645	82,299	54
....	....	155,000	0	1,300	....	156,300	......	....	130,000	25,000	55
49,014	12,391	228,812	0	8,057	27,225	325,427	......	....	165,000	63,812	56

[2] No report as to income.

[3] Included in receipt from mill tax.

TABLE 3.—*Property and income of Sta*

	Names of institutions.	Property.				
		Bound volumes in libraries.	Value of library, scientific apparatus, machinery, and furniture.	Value of grounds (including farm).	Value of buildings.	Endowment funds.
	1	2	3	4	5	6
57	North Carolina College of Agriculture and Engineering.	9,600	$339,683	$110,073	$643,534	....
58	North Dakota Agricultural College.....	26,995	310,987	95,000	595,000	....
59	University of North Dakota............	62,000	293,887	110,420	507,810	$2,061,150
60	Ohio University........................	47,000	289,000	541,652	950,000	153,133
61	Ohio State University..................	184,268	1,719,157	2,013,404	3,044,782	1,035,678
62	Miami University (Ohio)................	50,700	219,505	71,200	782,900	118,167
63	Oklahoma College for Women..........	4,500	35,000	16,374	260,611	....
64	University of Oklahoma................	30,286	271,116	101,889	705,560	3,670,000
65	Oklahoma Agricultural and Mechanical College.	27,049	343,816	60,000	538,516	....
66	Oregon State Agriculture College.......	40,612	400,623	438,716	877,980	202,463
67	University of Oregon..................	84,724	231,428	319,000	530,609	55,000
68	Pennsylvania State College.............	70,300	930,701	148,180	1,962,688	500,000
69	University of Porto Rico..............	7,500	97,451	65,910	186,541	10,850
70	Rhode Island State College.............	22,600	146,600	14,855	324,450	....
71	The Citadel, the Military College of South Corolina.	6,596	60,000	....	450,000	....
72	Clemson Agricultural College (S. C.)....	18,650	429,979	170,702	913,450	154,439
73	University of South Carolina...........	58,000	173,670	945,984	350,350	....
74	South Dakota State College of Agriculture and Mechanic Arts.	23,364	78,600	70,000	450,000	390,941
75	South Dakota State School of Mines.....	7,000	60,000	17,000	96,000	....
76	University of South Dakota............	35,000	210,000	50,000	500,000	....
77	University of Tennessee................	44,204	270,925	749,300	465,553	405,000
78	University of Texas[1]..................	129,878	704,076	147,500	1,703,615	2,000,000
79	Agricultural and Mechanical College of Texas.	20,000	535,121	149,121	1,762,394	209,000
80	College of Industrial Arts (Tex.)........	12,000	167,460	93,500	740,023	....
81	Agricultural College of Utah............	31,773	188,924	23,700	648,700	....
82	University of Utah.....................	53,065	100,000	50,000	750,000	20,000
83	University of Vermont and State Agricultural College.	96,960	286,222	75,000	1,180,000	1,063,525
84	Virginia Polytechnic Institute..........	34,927	178,000	80,000	613,000	....
85	University of Virginia..................	90,600	322,933	600,000	1,504,189	2,277,775
86	Virginia Military Institute..............	17,000	27,750	37,500	589,386	34,200
87	College of William and Mary (Va.).....	17,500	75,000	50,000	260,000	151,327
88	State College of Washington............	64,000	327,820	147,124	1,278,529	906,668
89	University of Washington..............	108,117	664,561	1,061,250	1,195,996	5,000,000
90	West Virginia University...............	64,826	300,000	300,000	800,000	116,000
91	University of Wisconsin................	253,000	1,712,495	2,317,311	4,769,488	704,399
92	University of Wyoming.................	41,000	304,000	100,000	487,000	239,339

[1] No report as to income.

universities and State colleges—Continued.

Income from—							Analysis of State appropriations.				
Student fees, excluding board and room rent.	Productive funds.	The State.	United States Government.	Private benefactions.	All other sources.	Total working income.	Mill tax rate.	Receipts from mill tax.	Appropriation for current expenses.	For building and permanent improvements.	
7	8	9	10	11	12	13	14	15	16	17	
$17,120	$7,500	$183,707	$134,707	....	$53,519	$396,553	....	....	$183,707	....	57
9,960	73,181	161,938	106,659	....	76,163	427,901	....	....	161,938	....	58
21,127	63,614	190,137	0	....	15,128	290,006	....	....	190,137	....	59
21,450	7,657	264,937	0	....	42,253	336,297	$\frac{17}{200}$	....	[2] 240,287	$24,650	60
155,380	61,019	1,667,533	128,149	$726	196,579	2,209,386	$\frac{107}{200}$	....	[2] 1,440,452	227,081	61
23,764	9,150	235,225	0	165	373	268,677	$\frac{17}{200}$	....	[2] 213,850	21,350	62
200	....	50,000	0	....	....	50,200	....	....	50,000	....	63
26,372	123,084	816,260	2,385	....	3,843	971,944	....	....	291,260	525,000	64
4,841	37,500	314,197	128,348	....	42,866	527,752	....	....	314,197	....	65
33,693	10,973	510,074	131,857	....	47,552	734,149	$\frac{4}{10}$	361,474	148,600	....	66
22,239	10,681	278,582	0	....	....	311,502	$\frac{3}{10}$	278,582	....	....	67
62,372	30,000	632,338	188,383	....	153,259	1,066,352	....	....	559,301	73,037	68
1,273	1,865	50,142	50,000	329	2,485	106,094	....	....	50,000	142	69
4,822	2,500	40,000	90,582	....	24,352	162,256	....	....	40,000	....	70
....	....	69,619	0	....	32,481	102,100	....	....	60,000	9,619	71
14,590	9,266	268,722	151,526	....	7,560	451,664	(3)	268,722	....	....	72
12,435	....	139,067	0	....	8,114	159,616	....	....	45,520	93,547	73
12,704	40,285	469,111	106,445	....	78,422	706,967	....	....	204,250	264,861	74
1,903	5,092	36,500	0	....	....	43,495	....	....	36,500	....	75
16,922	14,657	319,500	0	....	2,332	353,411	....	....	157,500	162,000	76
38,413	26,252	1,110,585	134,536	3,650	30,660	1,344,096	....	....	110,585	1,000,000	77
....	....	....	....	....	....	....	....	....	....	....	78
2,314	10,450	....	173,415	....	1,231,901	1,418,080	....	....	....	....	79
33,856	....	513,000	0	....	5,238	552,094	....	....	163,000	350,000	80
9,554	....	212,981	96,498	....	46,848	365,881	(4)	....	153,228	59,753	81
26,230	....	264,727	0	....	40,952	331,909	(5)	252,227	....	12,500	82
71,457	35,890	67,280	100,063	....	53,397	328,087	....	....	67,280	....	83
32,460	20,659	179,230	124,725	....	161,441	518,515	....	....	162,563	16,667	84
58,698	92,928	96,686	0	14,369	27,073	289,754	....	....	96,686	....	85
36,592	3,063	52,500	0	....	....	92,155	....	....	50,000	2,500	86
3,790	8,899	56,250	0	....	89	69,028	....	....	56,250	....	87
26,263	54,517	444,684	107,393	....	110,054	742,911	(6)	385,608	59,076	....	88
170,430	41,477	662,247	0	....	....	874,154	(7)	587,674	5,556	69,017	89
33,332	6,462	506,857	112,191	....	26,995	685,837	....	....	416,337	93,500	90
391,996	37,618	1,793,063	135,016	24,863	365,731	2,748,287	$\frac{3}{8}$	1,352,801	289,693	150,569	91
6,992	22,773	152,887	93,331	960	28,641	305,584	$\frac{1}{2}$	126,037	26,850	....	92

[2] Includes receipts from mill tax.
[3] Fertilizer tax.
[4] 28.34 per cent of 28 per cent of the State levy of 2 mills.
[5] 64.43 per cent of 28 per cent of the State levy of 2 mills.
[6] A little less than one-third of 1 mill.
[7] A little less than one-half of 1 mill.

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, No. 29

AMERICAN AGRICULTURAL COLLEGES

A STUDY OF THEIR ORGANIZATION AND THEIR REQUIREMENTS FOR ADMISSION AND GRADUATION

By CHESTER D. JARVIS
SPECIALIST IN AGRICULTURAL EDUCATION
BUREAU OF EDUCATION

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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Wilson and Lester A. Williams.
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No. 11. A community center—what it is and how to orga
Jackson.
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No. 14. Monthly record of current educational publications,
No. 15. Educational survey of Elyria, Ohio.
No. 16. Facilidades Ofrecidas a Los Estudiantes Extranjero
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No. 28. The public schools of Columbia, S. C.
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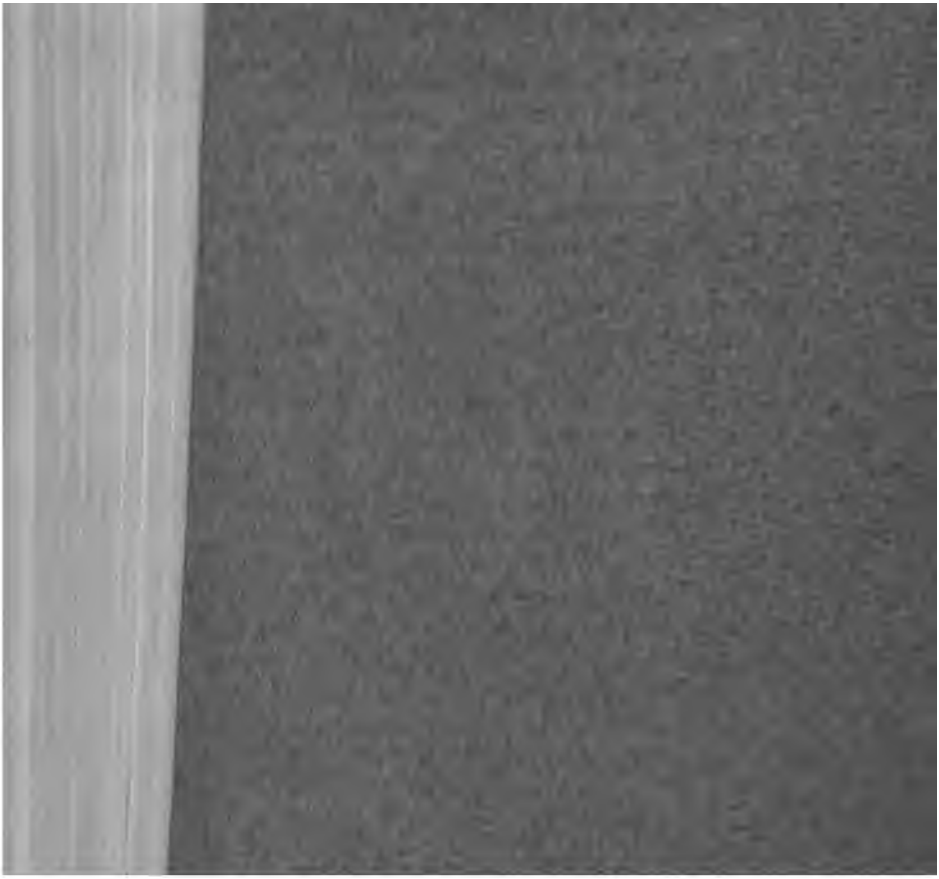

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1918, NO. 36

EDUCATIONAL DIRECTORY
1918-19

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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No. 31. The educational system of South Dakota.
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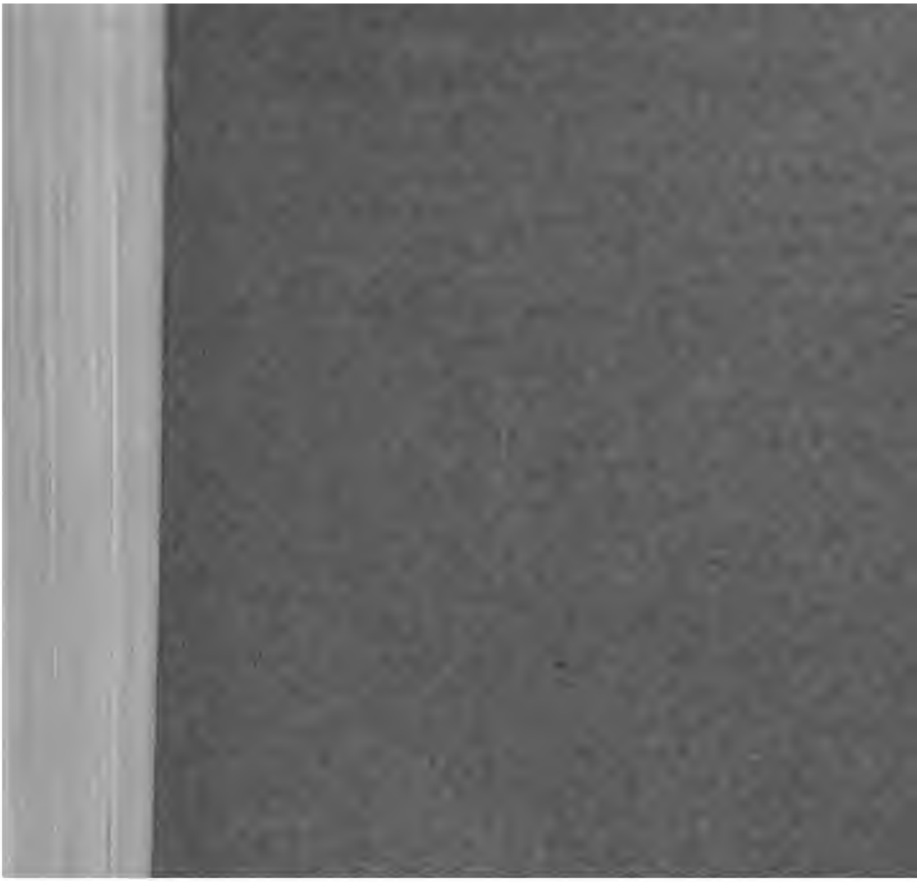

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